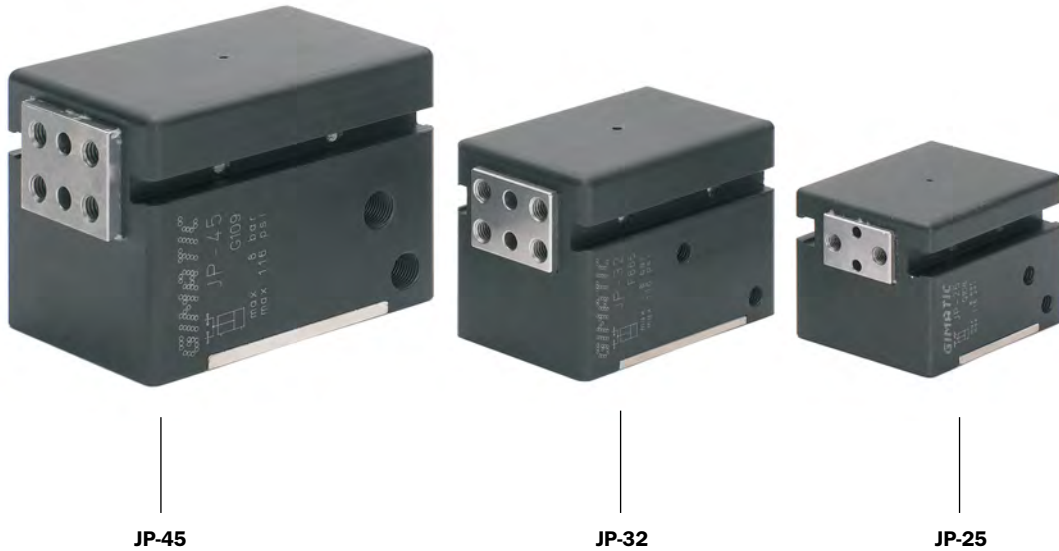


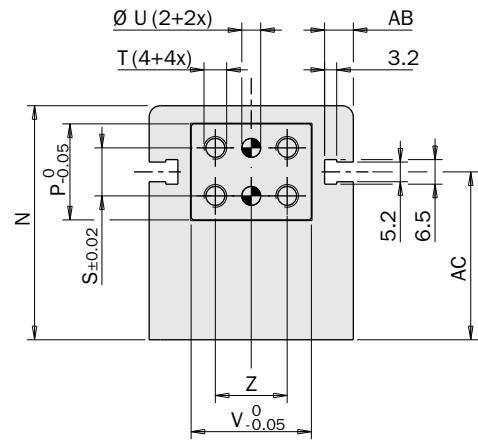
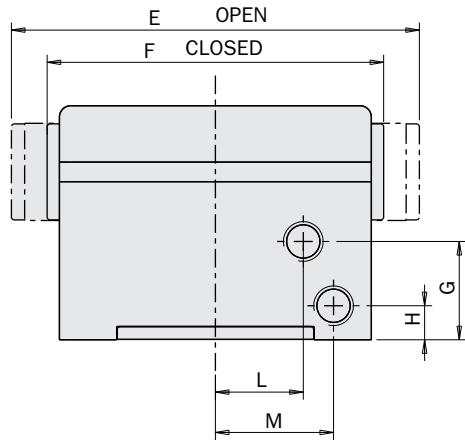
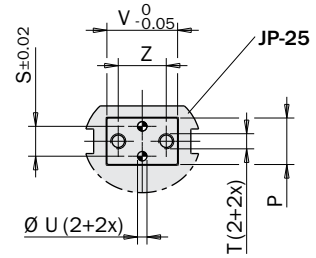
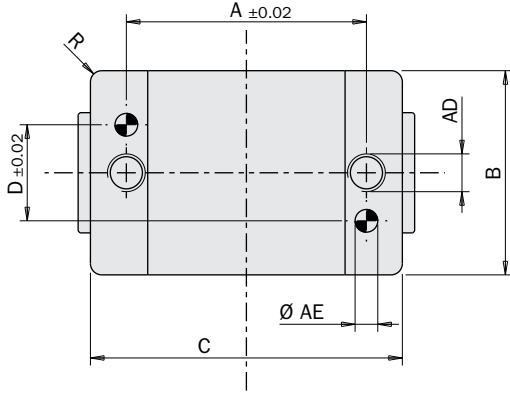
**2-jaw self-centering pneumatic parallel gripper (series JP)**

- Double acting.
- High gripping force.
- Suitable for heavy duty applications.
- Optional magnetic sensors.
- FDA-H1 food-grade grease.



|  | JP-25   | JP-32                  | JP-45                  |
|--|---|------------------------|------------------------|
| Price  | \$404.00  | \$448.00               | \$543.00               |
| Medium                                       | Filtered compressed air, lubricated or non-lubricated |                        |                        |
| Pressure range                               | 36-116 psi  |                        |                        |
| Temperature range                            | 41-140 °F   |                        |                        |
| Opening gripping force on each jaw at 87 psi | 30.35 lbf   | 78.7 lbf               | 112.4 lbf              |
| Total opening gripping force at 87 psi       | 60.7 lbf  | 157.4 lbf              | 224.8 lbf              |
| Closing gripping force on each jaw at 87 psi | 27 lbf  | 67.4 lbf               | 104.5 lbf              |
| Total closing gripping force at 87 psi       | 54 lbf  | 134.8 lbf              | 209 lbf                |
| Total stroke<br>±0.008"<br>(±0.2 mm)         | 0.37"<br>(9.5 mm)                                     | 0.47"<br>(12 mm)       | 0.74"<br>(18.9 mm)     |
| Maximum operating frequency                  | 3 Hz  | 3 Hz                   | 3 Hz                   |
| Air consumption per cycle                    | 0.36 in <sup>3</sup>                                  | 0.97 in <sup>3</sup>   | 1.22 in <sup>3</sup>   |
| Closing time without load                    | 0.02 s  | 0.04 s                 | 0.09 s                 |
| Repetition accuracy                          | 0.000787"<br>(0.02 mm)                                | 0.000787"<br>(0.02 mm) | 0.000787"<br>(0.02 mm) |
| Weight                                       | 240g  | 450g                   | 1050g                  |

**Dimensions (mm)**



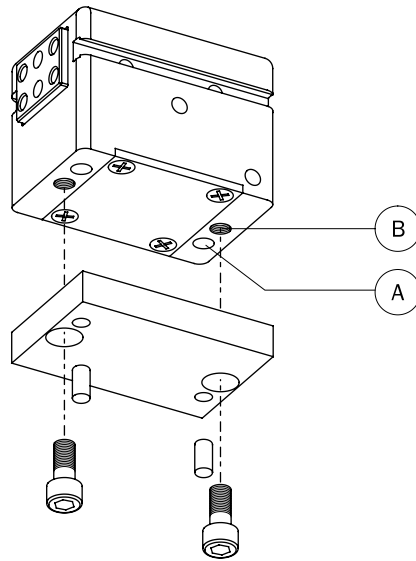
|              | A    | B    | C    | D    | E     | F  | G    | H | L    | M    | N    | P    | R | S    | T            | U              | V    | Z    | AB  | AC   | AD           | AE            |
|--------------|------|------|------|------|-------|----|------|---|------|------|------|------|---|------|--------------|----------------|------|------|-----|------|--------------|---------------|
| <b>JP-25</b> | 38.1 | 38.1 | 50.8 | 25.4 | 63.5  | 54 | 14.8 | 6 | 11.3 | 18.1 | 35.9 | 12.3 | 2 | 7.9  | M4<br>x6.5mm | Ø2.5H8<br>x6mm | 18.7 | 12.7 | 6.2 | 26.3 | M6<br>x12mm  | Ø5H8<br>x6mm  |
| <b>JP-32</b> | 50.8 | 41.3 | 63.5 | 19   | 80    | 68 | 22.5 | 6 | -    | 24   | 47.3 | 18.7 | 3 | 9.5  | M5<br>x10mm  | Ø4H8<br>x10mm  | 25   | 17.5 | 4.6 | 33.2 | M6<br>x12mm  | Ø5H8<br>x6mm  |
| <b>JP-45</b> | 63.5 | 54   | 82.5 | 25.4 | 107.9 | 89 | 26   | 9 | 23.2 | 31.2 | 61.9 | 25.4 | 3 | 12.7 | M6<br>x12mm  | Ø5H8<br>x10mm  | 31.8 | 19   | 7.6 | 44.4 | M10<br>x18mm | Ø6H8<br>x12mm |



**Gripper fastening**

The gripper can be fastened to a static or moving part. When on a moving part, you must pay attention to the inertial force to which the gripper and its load are subjected.

The gripper can be fastened with two screws in the threaded holes (B) and two dowel pins in the holes (A).

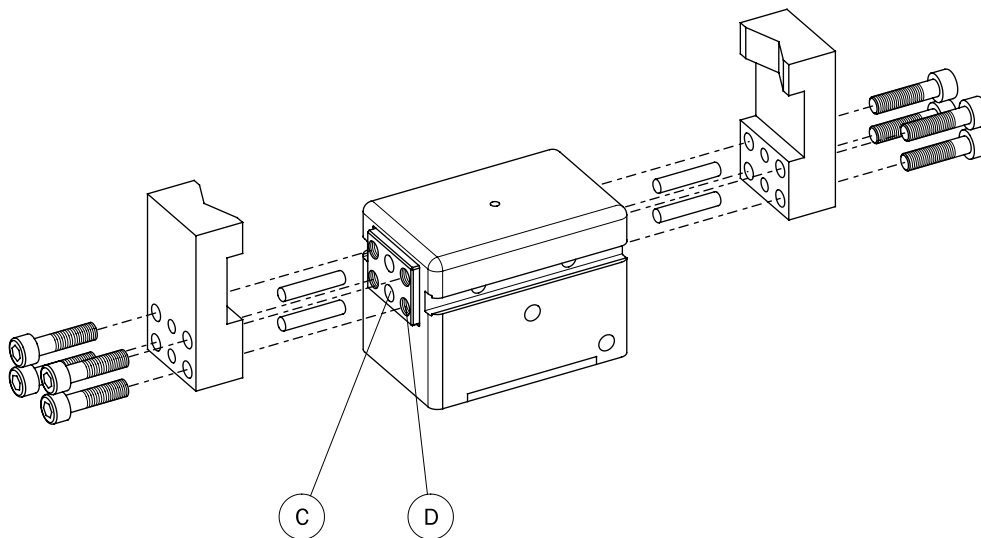


|   | JP-25       | JP-32       | JP-45        |
|---|-------------|-------------|--------------|
| A | Ø5H8 x 6 mm | Ø5H8 x 6 mm | Ø6H8 x 12 mm |
| B | M6x12 mm    | M6x12 mm    | M10x18 mm    |

**Gripping tool fastening**

The gripping tools must be as short and light as possible. They must be fastened by four screws (two in the case of JP-25) in the threaded holes (D).

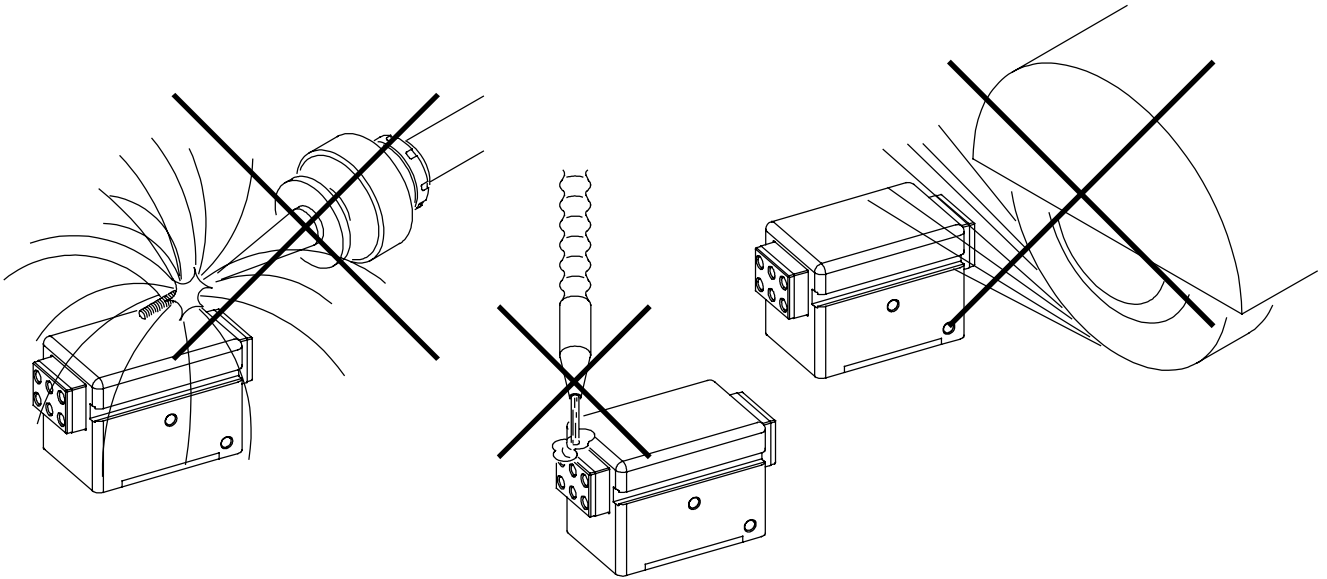
For a precise positioning on the jaws use two dowel pins in the calibrated holes (C).



|   | JP-25         | JP-32        | JP-45        |
|---|---------------|--------------|--------------|
| C | Ø2.5H8 x 6 mm | Ø4H8 x 10 mm | Ø5H8 x 10 mm |
| D | M4x6.5 mm     | M5x10 mm     | M6x12 mm     |

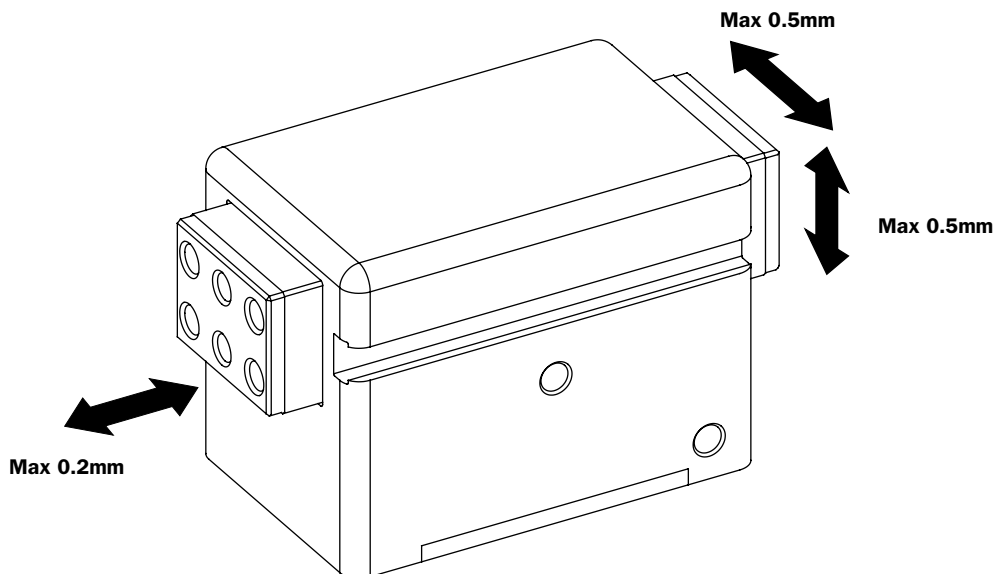
**Caution**

Never let the unit come into contact with corrosive substances, soldering splashes or abrasive powders as they may damage the gripper.  
 Never let personnel or objects stand within the operating range of the gripper.  
 Never operate the gripper if the machine on which it is fitted does not comply with safety laws and standards of your country.



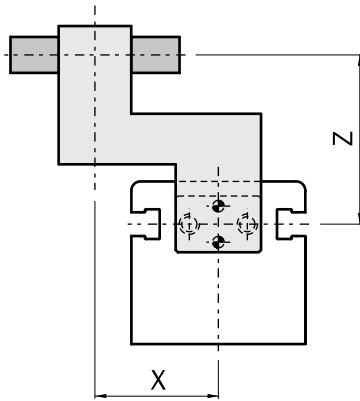
**Maintenance**

Grease the gripper after 10 million cycles with:  
 • BERULUB FG-H 2 SL  
 (Lubricant NSF H1 Registration No. 135919).  
 The figure below shows the jaw backlash.

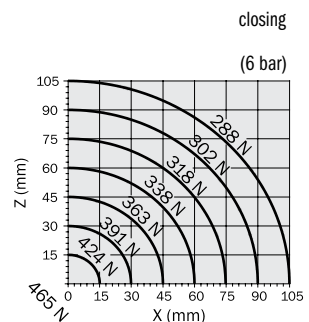
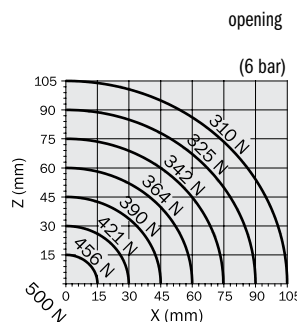
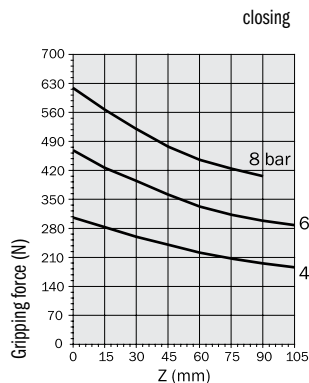
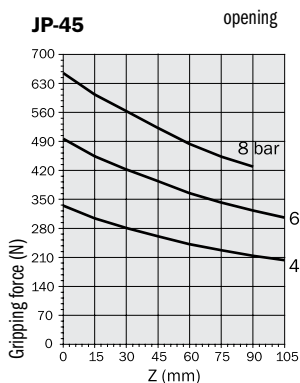
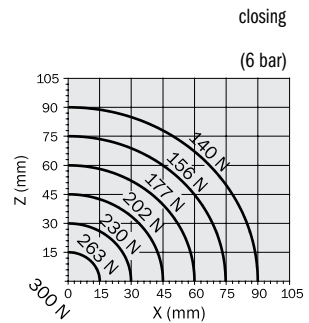
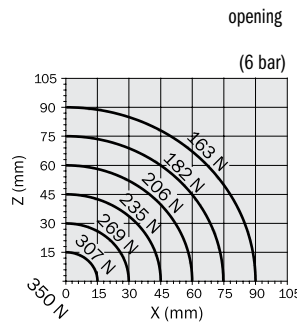
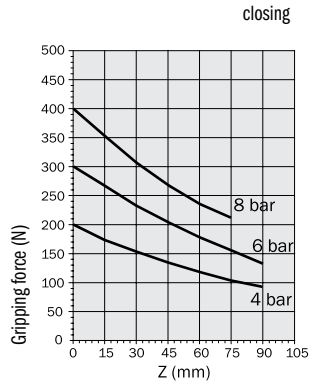
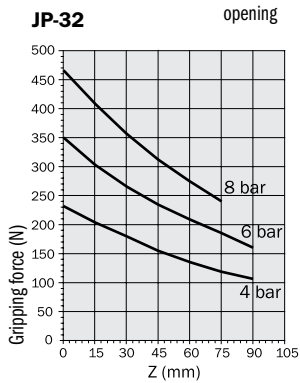
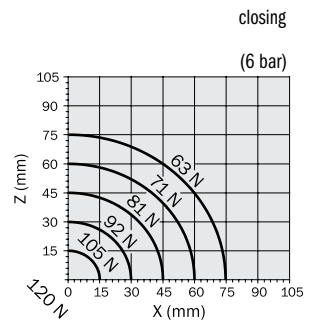
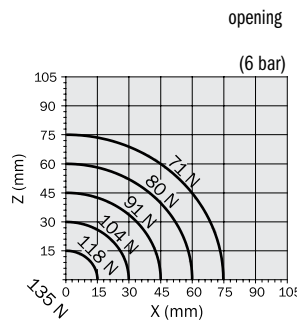
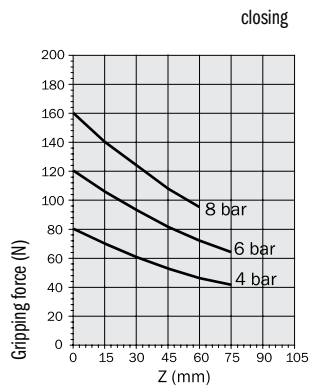
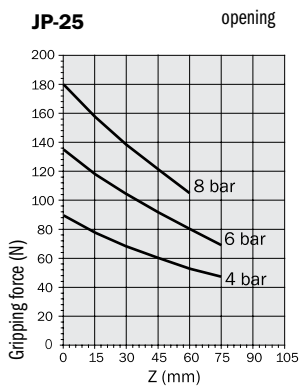


### Gripping force

The graphs show the medium gripping force on each jaw, as a function of the operating pressure, the gripping tool length Z and the overhanging X.

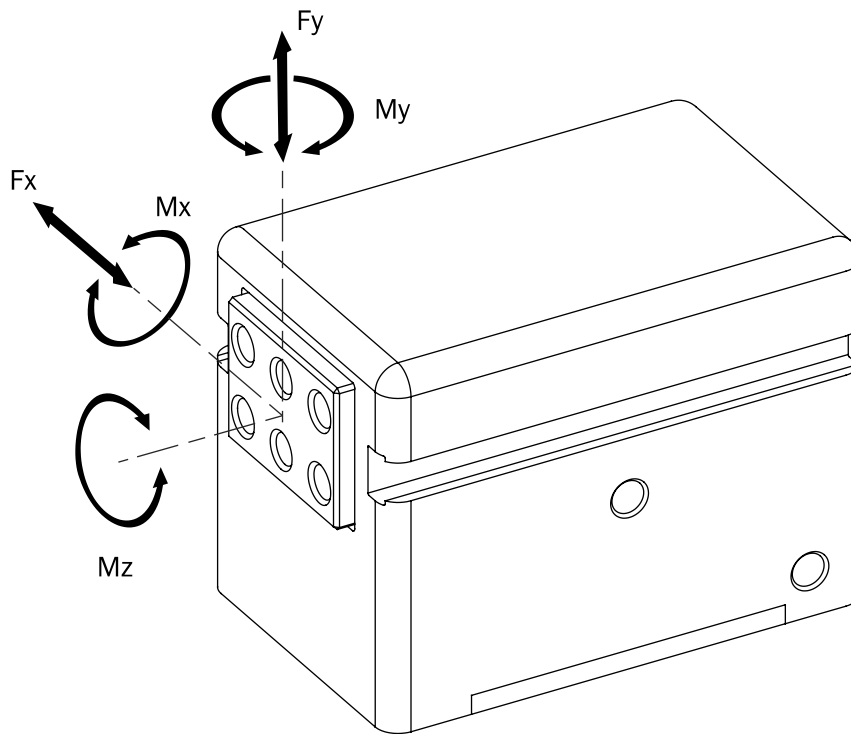


**The force shown in these graphs refers to one jaw. The total force is double.**



**Safety loads**

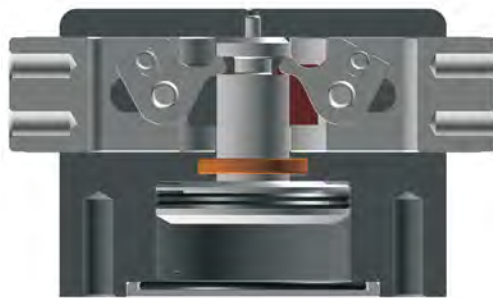
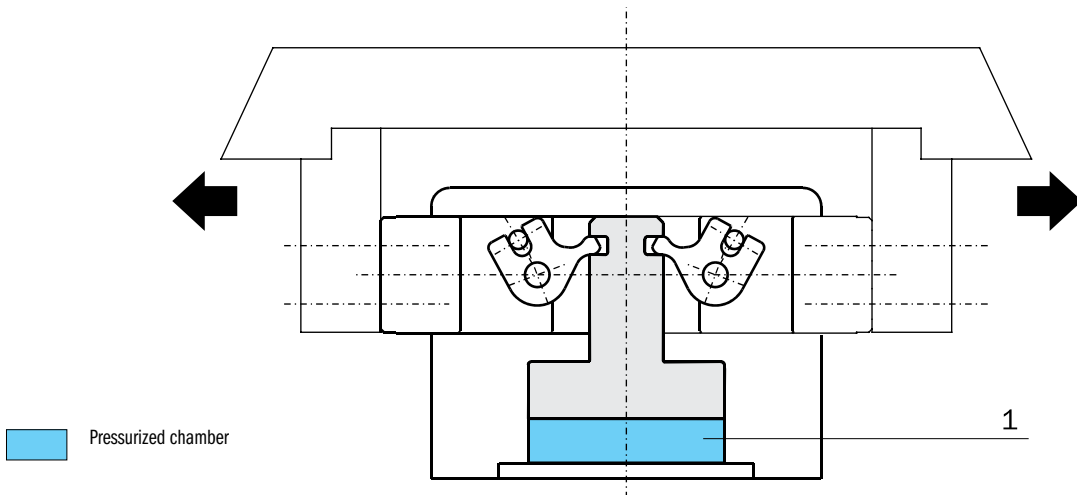
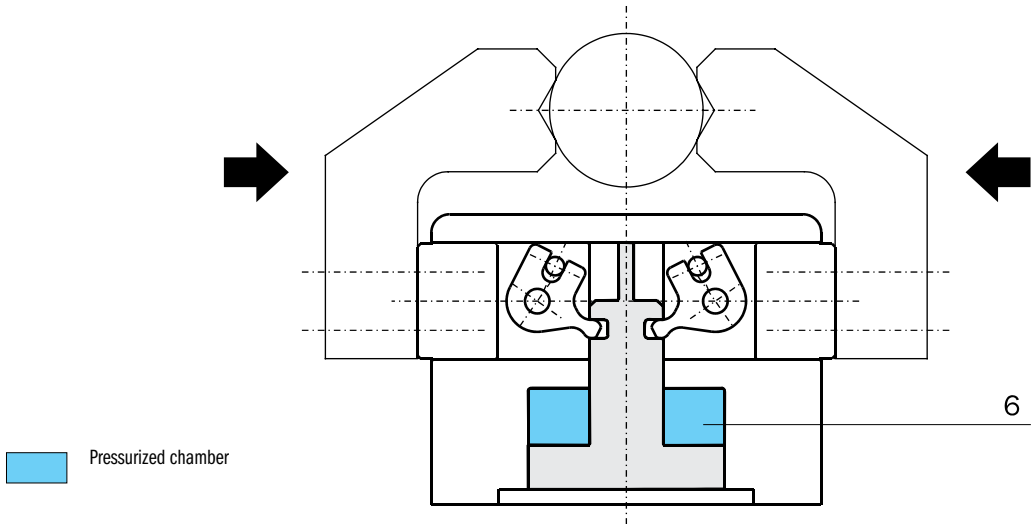
Check the table for maximum permitted loads.  
 Excessive forces or torques can damage the gripper, cause functioning troubles and endanger the safety of the operator.  
 $F_x s$ ,  $F_y s$ ,  $M_x s$ ,  $M_y s$ ,  $M_z s$ , are maximum permitted static loads. Static means with motionless jaws.  
 $F_x d$ ,  $F_y d$ ;  $M_x d$ ,  $M_y d$ ,  $M_z d$ , are maximum permitted dynamic loads. Dynamic means with running jaws.  
 $m$ , is the maximum permitted weight of each gripping tool, when the gripper works without speed adjustment.  
 If the weight is over the permitted value, it is necessary to decrease the speed of the jaw by using flow controllers (not supplied).



|         | JP-25  | JP-32  | JP-45  |
|---------|--------|--------|--------|
| $F_x s$ | 200 N  | 400 N  | 800 N  |
| $F_y s$ | 200 N  | 400 N  | 800 N  |
| $M_x s$ | 7 Nm   | 19 Nm  | 43 Nm  |
| $M_y s$ | 7 Nm   | 19 Nm  | 43 Nm  |
| $M_z s$ | 7 Nm   | 19 Nm  | 43 Nm  |
| $F_x d$ | 3 N    | 5 N    | 8 N    |
| $F_y d$ | 3 N    | 5 N    | 8 N    |
| $M_x d$ | 14 Ncm | 27 Ncm | 43 Ncm |
| $M_y d$ | 14 Ncm | 27 Ncm | 43 Ncm |
| $M_z d$ | 14 Ncm | 27 Ncm | 43 Ncm |
| $m$     | 200 g  | 300 g  | 400 g  |

**Gripping**

The gripper is double-acting for either internal or external gripping applications. The opening force is higher.



**Compressed air feeding**

The compressed air feeding can be accomplished on the lateral air ports with fittings and hoses (not supplied).

Compressed air in 1: gripper opening.  
 Compressed air in 6: gripper closing.

The compressed air, must be filtered from 5 to 40 µm.  
 Maintain the medium selected at the start, lubricated or not, for the complete service life of the gripper.

The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.



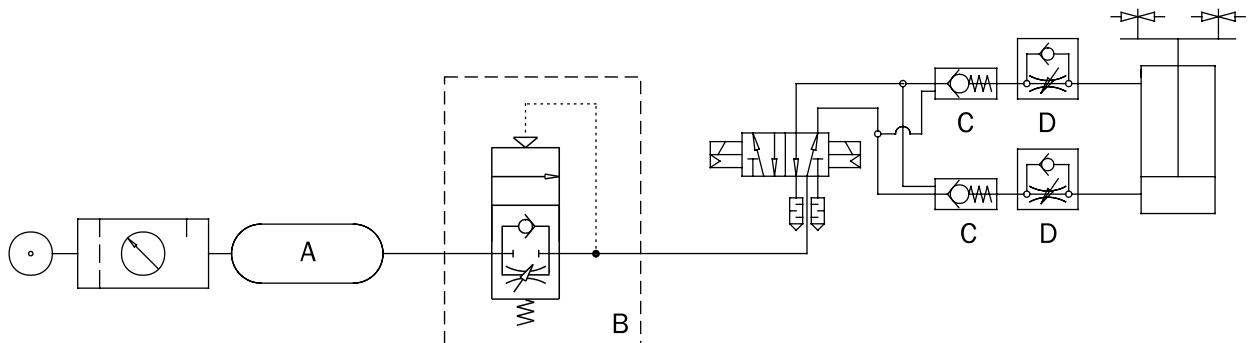
**Pneumatic circuit**

Possible problems on a compressed air circuit:

- 1- Pressure variation.
- 2- Pressurizing with empty cylinder.
- 3- Sudden pressure black-out.
- 4- Excessive speed of the jaws.

Possible solutions:

- 1- Compressed air storage (A).
- 2- Start-up valve (B).
- 3- Safety valve (C).
- 4- Flow controller (D).

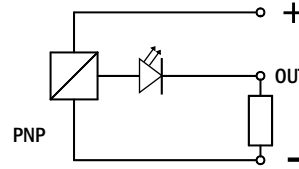
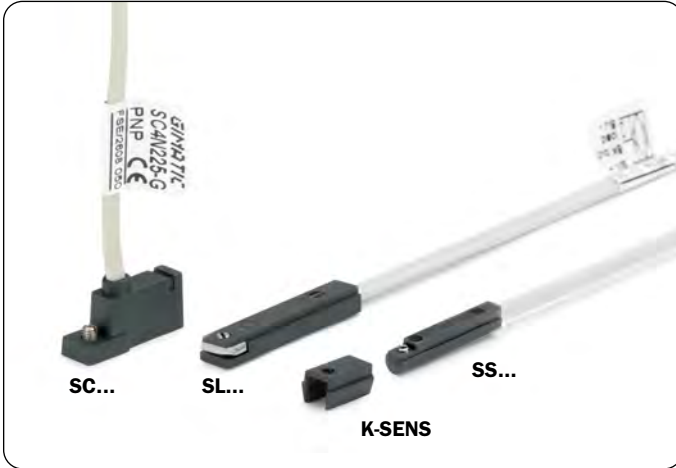




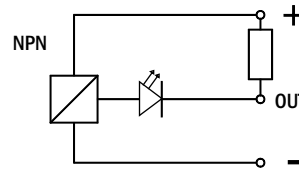
**Sensors**

The operating position is detected by magnetic proximity sensors (optional) through a magnet placed on the piston. Due to the presence of magnetic proximity sensors, the unit should not be used in the vicinity of large masses of ferromagnetic material or intense magnetic fields as this may cause detection problems.

The sensors that can be used are:

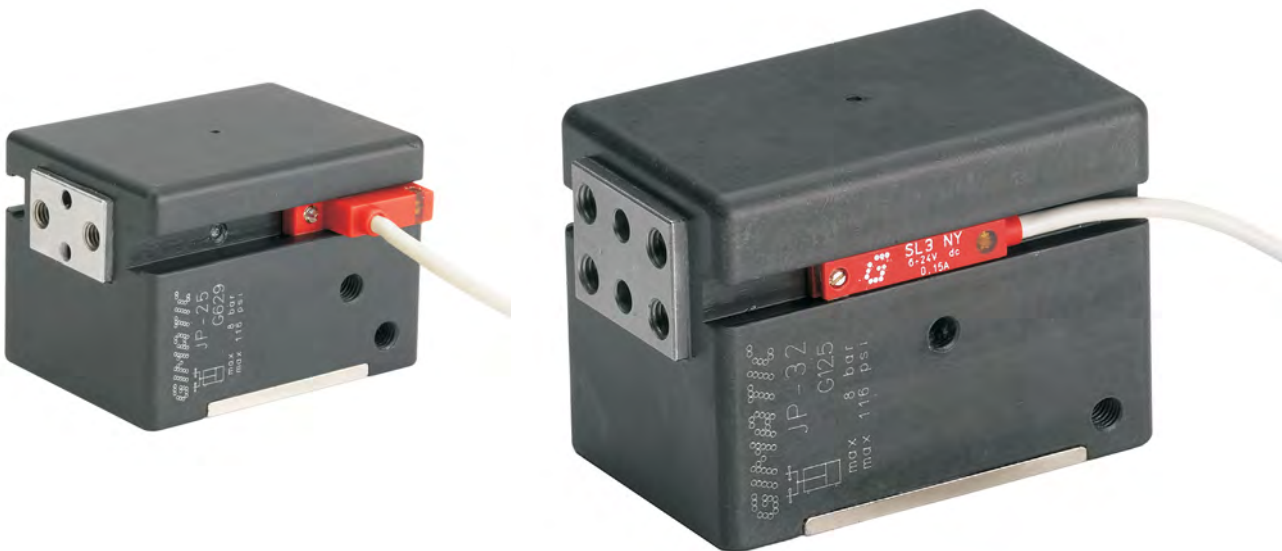


Magneto-resistive

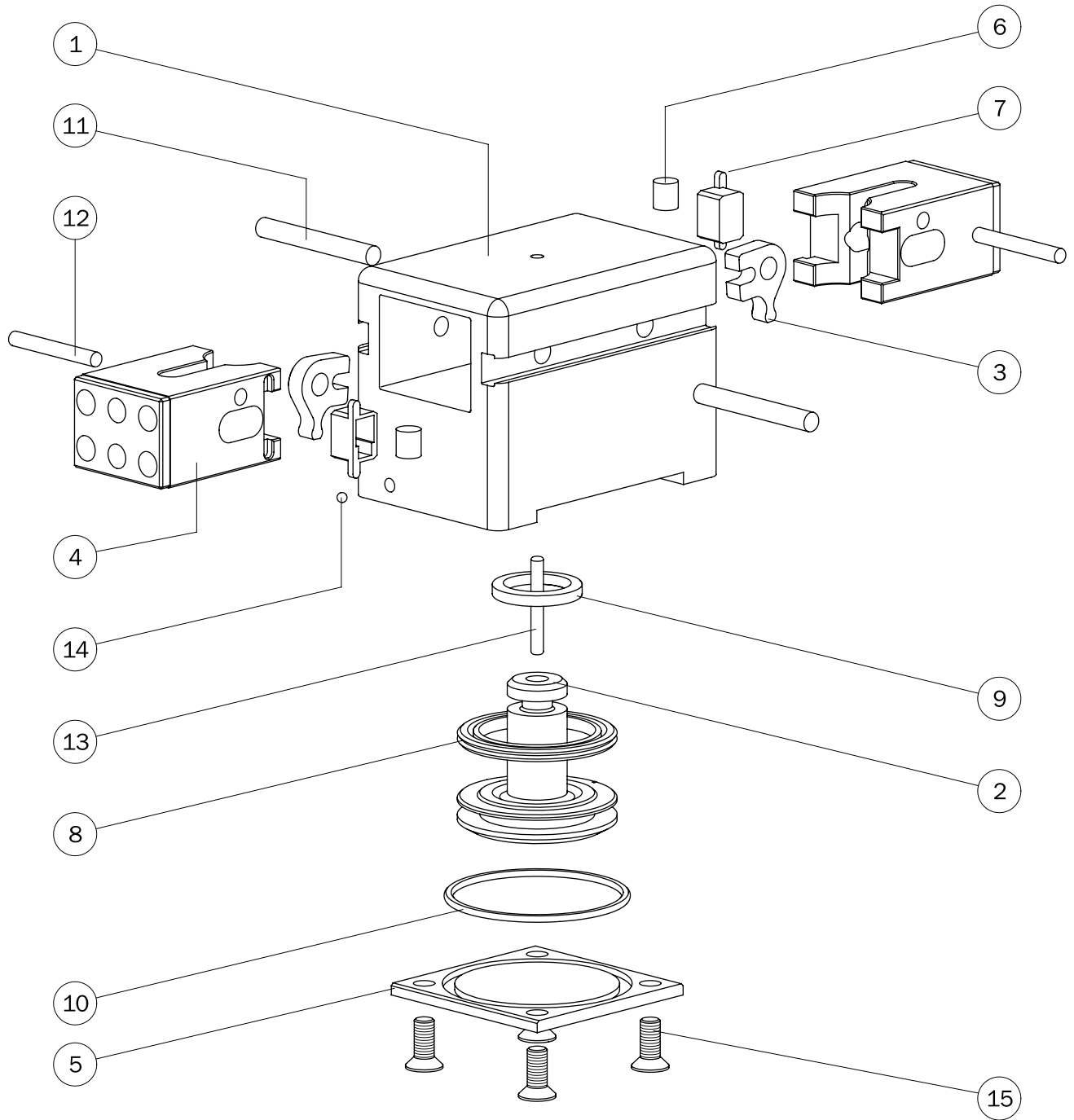


|          |     |                        |         | JP-25                                   | JP-32                                   | JP-45                                   |
|----------|-----|------------------------|---------|---|---|---|
| SC4N225G | PNP | 2.5m cable             | \$33.29 | <input checked="" type="checkbox"/>     | <input type="checkbox"/>                | <input checked="" type="checkbox"/>     |
| SC3N203G | PNP | M8 snap plug connector | \$29.13 | <input checked="" type="checkbox"/>     | <input type="checkbox"/>                | <input checked="" type="checkbox"/>     |
| SL4N225G | PNP | 2.5m cable             | \$26.14 | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     |
| SL4M225G | NPN | 2.5m cable             | \$26.14 | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     |
| SL3N203G | PNP | M8 snap plug connector | \$29.96 | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     |
| SL3M203G | NPN | M8 snap plug connector | \$29.96 | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/>     |
| SS4N225G | PNP | 2.5m cable             | \$26.14 | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) |
| SS4M225G | NPN | 2.5m cable             | \$26.14 | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) |
| SS3N203G | PNP | M8 snap plug connector | \$29.96 | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) |
| SS3M203G | NPN | M8 snap plug connector | \$29.96 | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) | <input checked="" type="checkbox"/> (1) |

(1) Must buy the adapter K-SENS separately.



**Part list**



|    |                 | <b>JP-25</b>          | <b>JP-32</b>           | <b>JP-45</b>           |    |
|----|-----------------|-----------------------|------------------------|------------------------|----|
| 1  | Gripper housing | JP-25-01              | JP-32-01               | JP-45-01               | 1  |
| 2  | Piston          | JP-25-02              | JP-32-02               | JP-45-02               | 2  |
| 3  | Lever           | JP-25-03              | JP-32-03               | JP-45-03               | 3  |
| 4  | Jaw             | JP-25-04              | JP-32-04               | JP-45-04               | 4  |
| 5  | Cover           | JP-25-05              | JP-32-05               | JP-45-05               | 5  |
| 6  | Magnet          | PAR-06-7              | FES-16-3-9             | FES-16-3-9             | 6  |
| 7  | Magnet housing  | PS-0030-7             | JP-32-6                | JP-45-6                | 7  |
| 8  | Dynamic gasket  | 25x18x2.4 (GUAR-003M) | 32x23x3 (GUAR-004P)    | 45x36x3 (GUAR-026P)    | 8  |
| 9  | Dynamic gasket  | Ø1.78x8.73 (GUAR-013) | 18x12x3 (GUAR-014)     | 18x12x3 (GUAR-014)     | 9  |
| 10 | O-RING gasket   | Ø1x25 (GUAR-086)      | Ø1.78x34.65 (GUAR-062) | Ø1.78x47.35 (GUAR-017) | 10 |
| 11 | Dowel pin       | JP-25-7               | JP-32-7                | JP-45-7                | 11 |
| 12 | Dowel pin       | Ø2.5x17.8 mm DIN 5402 | Ø3x24 mm DIN 6325      | Ø4x30 mm DIN 6325      | 12 |
| 13 | Dowel pin       | Ø2x12 mm DIN 6325     | Ø2.5x20 mm DIN 6325    | Ø2.5x23.8 mm DIN 6325  | 13 |
| 14 | Ball            | Ø2 mm AA DIN 5401 A   | Ø2 mm AA DIN 5401 A    | Ø2 mm AA DIN 5401 A    | 14 |
| 15 | Screw           | M3x8 mm DIN 965A INOX | M4x10 mm DIN 965A INOX | M4x10 mm DIN 965 INOX  | 15 |