

## Parallel grippers HGPC

**FESTO**



# Parallel grippers HGPC

Key features

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## At a glance

### General

The compact and low-cost parallel gripper consists of a two-part symmetrical housing. The piston moves traverse to the half-shell casing in an optimum housing design that

guarantees reliable operation, long service life and convenient sensing. The gripper jaws move along the half shells in backlash-free, preloaded ball bearing guides.

- Double-acting gripper
- Compression spring for supplementary or retaining gripping forces
- Internal fixed flow control, does away with the need for external flow control in 80% of applications
- High force with minimal volume

- Suitable for external and internal gripping
- Wide range of options for attaching drive units
- Repetition accuracy of 0.05 mm
- Slot for proximity sensor SME/SMT-10



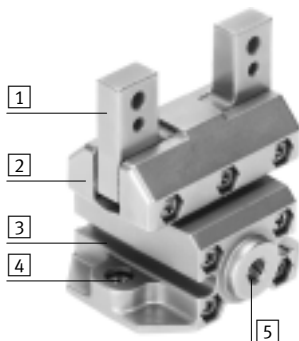
Note

Sizing software

Gripper selection

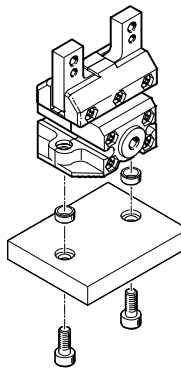
→ [www.festo.com](http://www.festo.com)

## Details

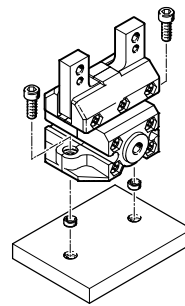


- 1 Gripper jaw with ball bearing guide
- 2 Housing based on half-shell principle
- 3 Slot for proximity sensor, for sensing the piston position
- 4 Mounting option
- 5 Supply port

## Mounting option from underneath

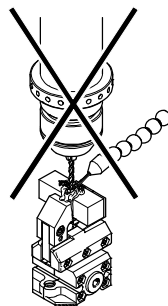


## from above

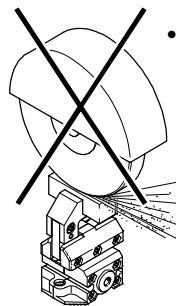


Note

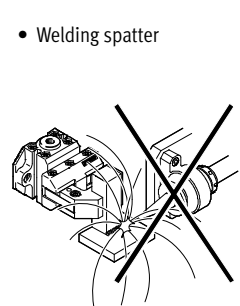
Parallel grippers are not designed for the following applications:



- Machining
- Aggressive media



- Grinding dust



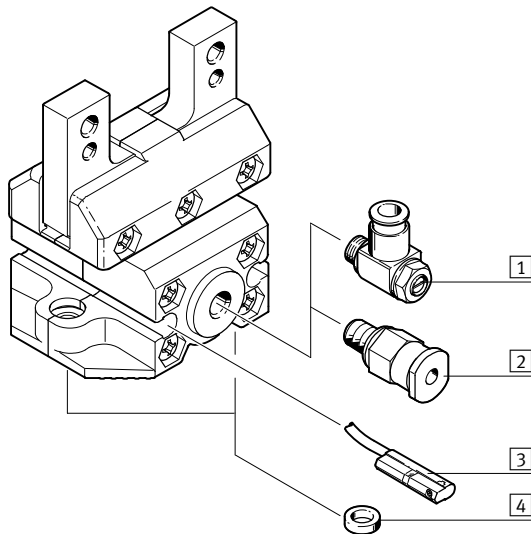
- Welding spatter

# Parallel grippers HGPC

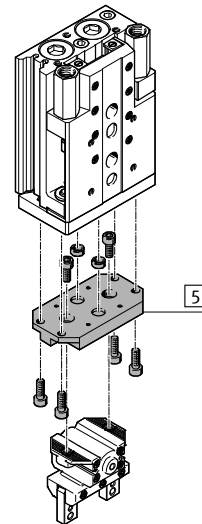
Peripherals overview and type codes

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## Peripherals overview



## System product for handling and assembly technology



| Accessories                       |                                                                                 |  |                 |
|-----------------------------------|---------------------------------------------------------------------------------|--|-----------------|
| Type                              | Description                                                                     |  | → Page/Internet |
| 1 One-way flow control valve GRLA | For regulating speed                                                            |  | gria            |
| 2 Push-in fitting QS              | For connecting compressed air tubing with standard O.D.                         |  | qs              |
| 3 Proximity sensor SME/SMT-10     | For sensing the piston position                                                 |  | 14              |
| 4 Centring sleeve ZBH             | For centring when attaching to a drive<br>(2 included in the scope of delivery) |  | 14              |
| 5 Adapter kit HMSV, HAPG          | Drive/gripper connections                                                       |  | 12              |

## Type codes

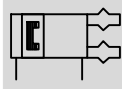
|                              |                      |   |    |   |   |   |    |
|------------------------------|----------------------|---|----|---|---|---|----|
| HGPC                         |                      | — | 12 | — | A | — | G2 |
| <b>Type</b>                  |                      |   |    |   |   |   |    |
| HGPC                         | Parallel gripper     |   |    |   |   |   |    |
| <b>Size</b>                  |                      |   |    |   |   |   |    |
| <b>Position sensing</b>      |                      |   |    |   |   |   |    |
| A                            | Via proximity sensor |   |    |   |   |   |    |
| <b>Gripping force backup</b> |                      |   |    |   |   |   |    |
| G2                           | Closing              |   |    |   |   |   |    |

# Parallel grippers HGPC

Technical data

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Function  
Double-acting  
HGPC-...-A



Single-acting or  
with gripping force retention  
closing HGPC-...-G2



- Ø - Size  
12, 16, 20 mm

- I - Stroke  
6 ... 14 mm



| General technical data                              |      |                                        |    |    |
|-----------------------------------------------------|------|----------------------------------------|----|----|
| Size                                                |      | 12                                     | 16 | 20 |
| Constructional design                               |      | Wedge-shaped drive                     |    |    |
|                                                     |      | Guided motion sequence                 |    |    |
| Mode of operation                                   |      | Double-acting                          |    |    |
| Gripper function                                    |      | Parallel                               |    |    |
| Number of gripper jaws                              |      | 2                                      |    |    |
| Max. load per external gripper finger <sup>1)</sup> | [g]  | 20                                     | 50 | 80 |
| Stroke per gripper jaw                              | [mm] | 3                                      | 5  | 7  |
| Pneumatic connection                                |      | M5                                     |    |    |
| Repetition accuracy <sup>2)</sup>                   | [mm] | ≤ 0.05                                 |    |    |
| Max. interchangeability                             | [mm] | ≤ 0.2                                  |    |    |
| Max. gripper jaw backlash <sup>3)</sup>             | [mm] | 0                                      |    |    |
| Max. gripper jaw angular backlash <sup>4)</sup>     | [°]  | 0                                      |    |    |
| Max. operating frequency                            | [Hz] | 4                                      |    |    |
| Rotational symmetry                                 | [mm] | < Ø 0.2                                |    |    |
| Position sensing                                    |      | For proximity sensing                  |    |    |
| Type of mounting                                    |      | With female thread and centring sleeve |    |    |
| Mounting position                                   |      | Any                                    |    |    |

- 1) Valid for unthrottled operation  
2) End-position drift under constant conditions of use with 100 consecutive strokes in the direction of movement of the gripper jaws  
3) Perpendicular to the direction of motion of the gripper jaws  
4) Pretensioned, backlash-free ball bearing guide

| Operating and environmental conditions       |                                                                                                        |       |            |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------|-------|------------|
| Min. operating pressure                      | HGPC-...-A                                                                                             | [bar] | 2          |
|                                              | HGPC-...-G2                                                                                            | [bar] | 4          |
| Max. operating pressure                      |                                                                                                        | [bar] | 8          |
| Operating medium                             | Compressed air in accordance with ISO 8573-1:2010 [7:4:4]                                              |       |            |
| Note on operating/pilot medium               | Operation with lubricated medium possible (in which case lubricated operation will always be required) |       |            |
| Ambient temperature <sup>1)</sup>            |                                                                                                        | [°C]  | +5 ... +60 |
| Corrosion resistance class CRC <sup>2)</sup> |                                                                                                        |       | 2          |

- 1) Note operating range of proximity sensors  
2) Corrosion resistance class 2 according to Festo standard 940 070  
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

| Weights [g] |     |     |     |
|-------------|-----|-----|-----|
| Size        | 12  | 16  | 20  |
| HGPC-...-A  | 152 | 241 | 473 |
| HGPC-...-G2 | 154 | 244 | 477 |

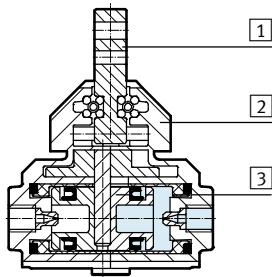
# Parallel grippers HGPC

Technical data

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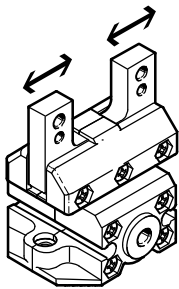
## Materials

Sectional view



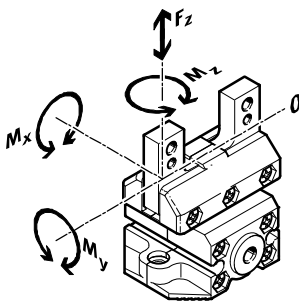
| Parallel gripper |                   |                                |
|------------------|-------------------|--------------------------------|
| 1                | Gripper jaw       | High-alloy steel               |
| 2                | Housing           | Die-cast zinc                  |
| 3                | Piston            | Polyamide                      |
| -                | Seals             | Polyurethane, nitrile rubber   |
| -                | Note on materials | Copper, PTFE and silicone-free |
|                  |                   | Conforms to RoHS               |

## Gripping force [N] at 6 bar



| Size                           | 12 | 16   | 20  |
|--------------------------------|----|------|-----|
| Gripping force per gripper jaw |    |      |     |
| Opening                        | 22 | 41.5 | 63  |
| Closing                        | 22 | 41.5 | 63  |
| Total gripping force           |    |      |     |
| Opening                        | 44 | 83   | 126 |
| Closing                        | 44 | 83   | 126 |

## Static characteristic load values at the gripper jaws



Indicated permissible forces and torques apply to a single gripper jaw. The indicated values include the lever arm, additional applied loads caused by the workpiece or external gripper

fingers, as well as forces which occur during movement. The zero coordinate line (gripper finger guide) must be taken into consideration for the calculation of torques.

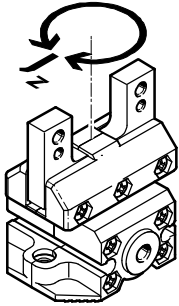
| Size                          |      | 12 | 16  | 20  |
|-------------------------------|------|----|-----|-----|
| Max. permissible force $F_z$  | [N]  | 40 | 80  | 120 |
| Max. permissible torque $M_x$ | [Nm] | 1  | 2,5 | 5   |
| Max. permissible torque $M_y$ | [Nm] | 1  | 2,5 | 5   |
| Max. permissible torque $M_z$ | [Nm] | 1  | 2,5 | 5   |

# Parallel grippers HGPC

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## Mass moment of inertia [kgm<sup>2</sup>x10<sup>-4</sup>]



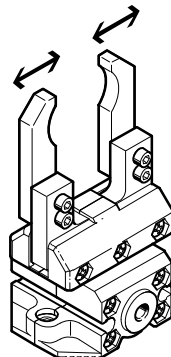
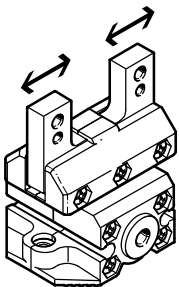
Mass moment of inertia [kgm<sup>2</sup>x10<sup>-4</sup>]  
of the parallel gripper in relation to  
the central axis with no load.

| Size        | 12    | 16    | 20    |
|-------------|-------|-------|-------|
| HGPC-...-A  | 0.272 | 0.679 | 2.095 |
| HGPC-...-G2 | 0.274 | 0.683 | 2.105 |

## Opening and closing times [ms] at 6 bar

without external gripper fingers

with external gripper fingers



The indicated opening and closing  
times [ms] have been measured at  
room temperature and at 6 bar  
operating pressure with horizontally  
mounted gripper without additional

gripper fingers. The grippers must be  
throttled for greater loads [g].  
Opening and closing times must then  
be adjusted correspondingly.

| Size                                                    |         | 12 | 16  | 20  |
|---------------------------------------------------------|---------|----|-----|-----|
| without external gripper fingers                        |         |    |     |     |
| HGPC-...-A                                              | Opening | 30 | 60  | 90  |
|                                                         | Closing | 30 | 60  | 90  |
| HGPC-...-G2                                             | Opening | 30 | 70  | 105 |
|                                                         | Closing | 30 | 50  | 75  |
| with external gripper fingers as a function of the load |         |    |     |     |
| HGPC-...                                                | 40 g    | 40 | –   | –   |
|                                                         | 50 g    | 60 | –   | –   |
|                                                         | 60 g    | 80 | –   | –   |
|                                                         | 70 g    | –  | 80  | –   |
|                                                         | 100 g   | –  | 100 | –   |
|                                                         | 120 g   | –  | –   | 100 |

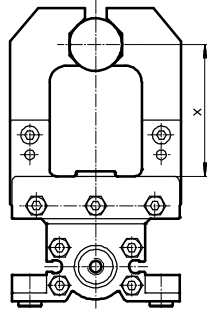
# Parallel grippers HGPC

Technical data

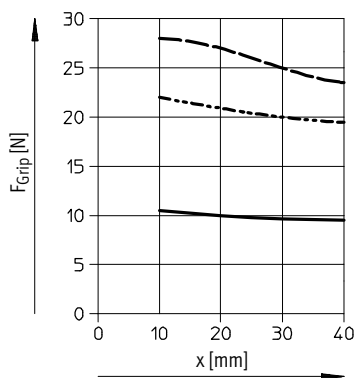
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## Gripping force $F_{Grip}$ per gripper jaw as a function of operating pressure and lever arm $x$

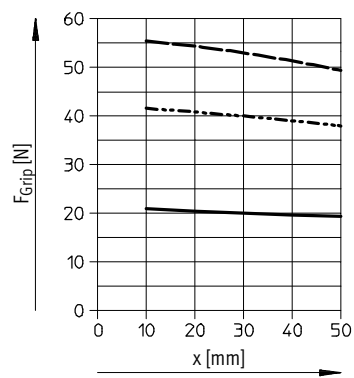
Gripping forces as a function of the operating pressure and the lever arm can be determined for the size using the following graph.



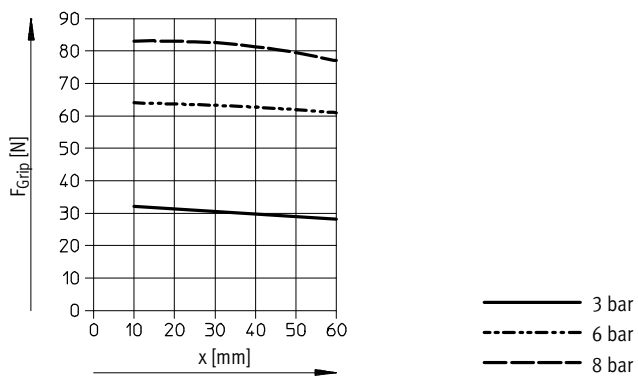
HGPC-12-A



HGPC-16-A



HGPC-20-A



# Parallel grippers HGPC

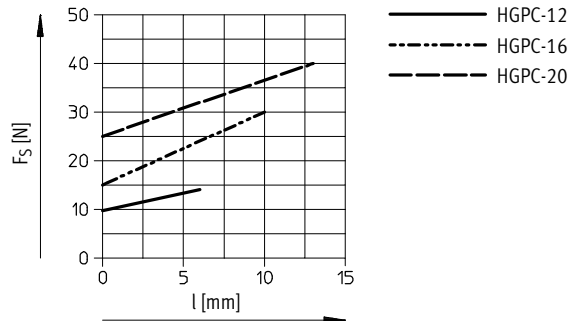
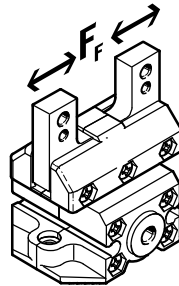
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## Spring force $F_S$ as a function of the gripper size and the overall stroke $l$

Gripping force retention for HGPC-...-G2

Spring forces  $F_S$  as a function of the gripper size and the overall stroke  $l$  for various gripper types (HGPC-...-G2) can be determined using the following graphs.



The lever arm  $x$  must be taken into consideration when determining the actual spring force  $F_{S\text{total}}$ . The formulae for calculating the spring force are provided in the table opposite.

| Size | $F_{S\text{total}} =$           |
|------|---------------------------------|
| 12   | $-0.02 \cdot x + 0.5 \cdot F_S$ |
| 16   | $-0.05 \cdot x + 0.5 \cdot F_S$ |
| 20   | $-0.05 \cdot x + 0.5 \cdot F_S$ |

## Determination of the actual gripping forces $F_{Gr}$ for HGPC-...-G2 depending on the application

Parallel grippers with integrated spring type HGPC-...-G2 (closing gripping force retention) can be used as:

- single-acting grippers

- grippers with supplementary gripping force
- grippers with gripping force retention

In order to calculate available gripping forces  $F_{Gr}$  (per gripper jaw), the gripping force ( $F_{Grip}$ ) and spring

force ( $F_{S\text{total}}$ ) must be combined accordingly.

### Application

#### Single-acting

- Gripping with spring force:  
 $F_{Gr} = F_{S\text{total}}$
- Gripping with pressure force:  
 $F_{Gr} = F_{Grip} - F_{S\text{total}}$

#### Supplementary gripping force

- Gripping with pressure and spring force:  
 $F_{Gr} = F_{Grip} + F_{S\text{total}}$

#### Gripping force retention

- Gripping with spring force:  
 $F_{Gr} = F_{S\text{total}}$

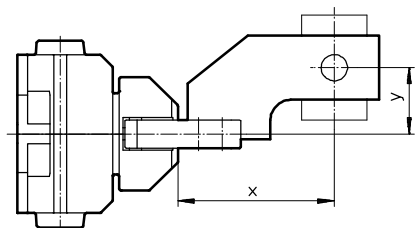


# Parallel grippers HGPC

Technical data

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## Gripping force $F_{Grip}$ per gripper jaw at 6 bar as a function of lever arm $x$ and eccentricity $y$



Gripping forces at 6 bar dependent upon eccentric application of force and the maximum permissible off-centre point of force application can be determined for the size using the following graph.

### Calculation example

Given:

Lever arm  $x = 20$  mm

Eccentricity  $y = 22$  mm

To be found:

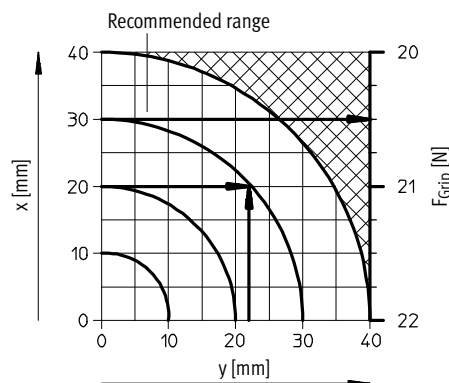
Gripping force at 6 bar

Procedure:

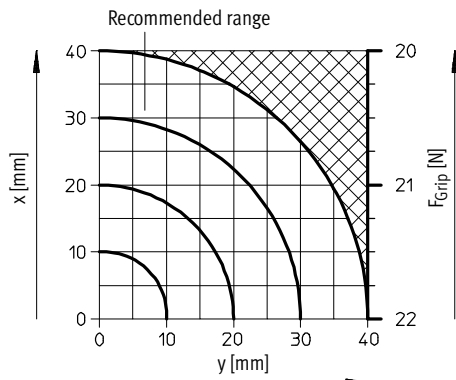
- Determine the intersection  $xy$  between lever arm  $x$  and eccentricity  $y$  in the graph for HGPC-12-A...
- Draw an arc (with centre at origin) through intersection  $xy$ .
- Determine the intersection between the arc and the X axis.
- Read the gripping force.

Result:

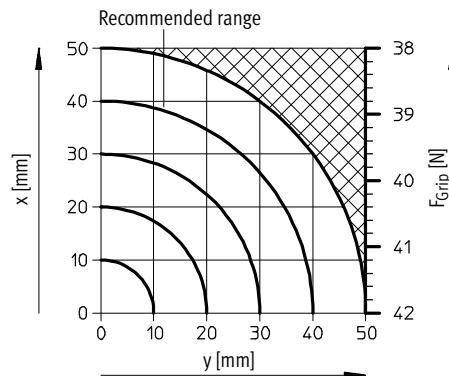
Gripping force  $F = \text{approx. } 20.5$  N



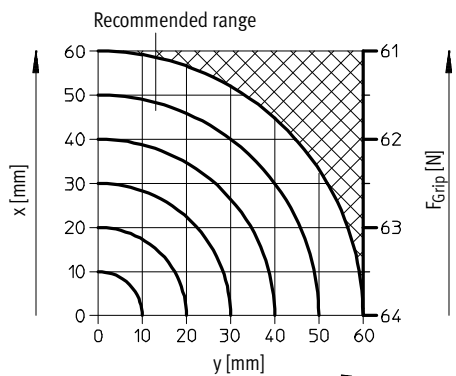
### HGPC-12-A



### HGPC-16-A



### HGPC-20-A



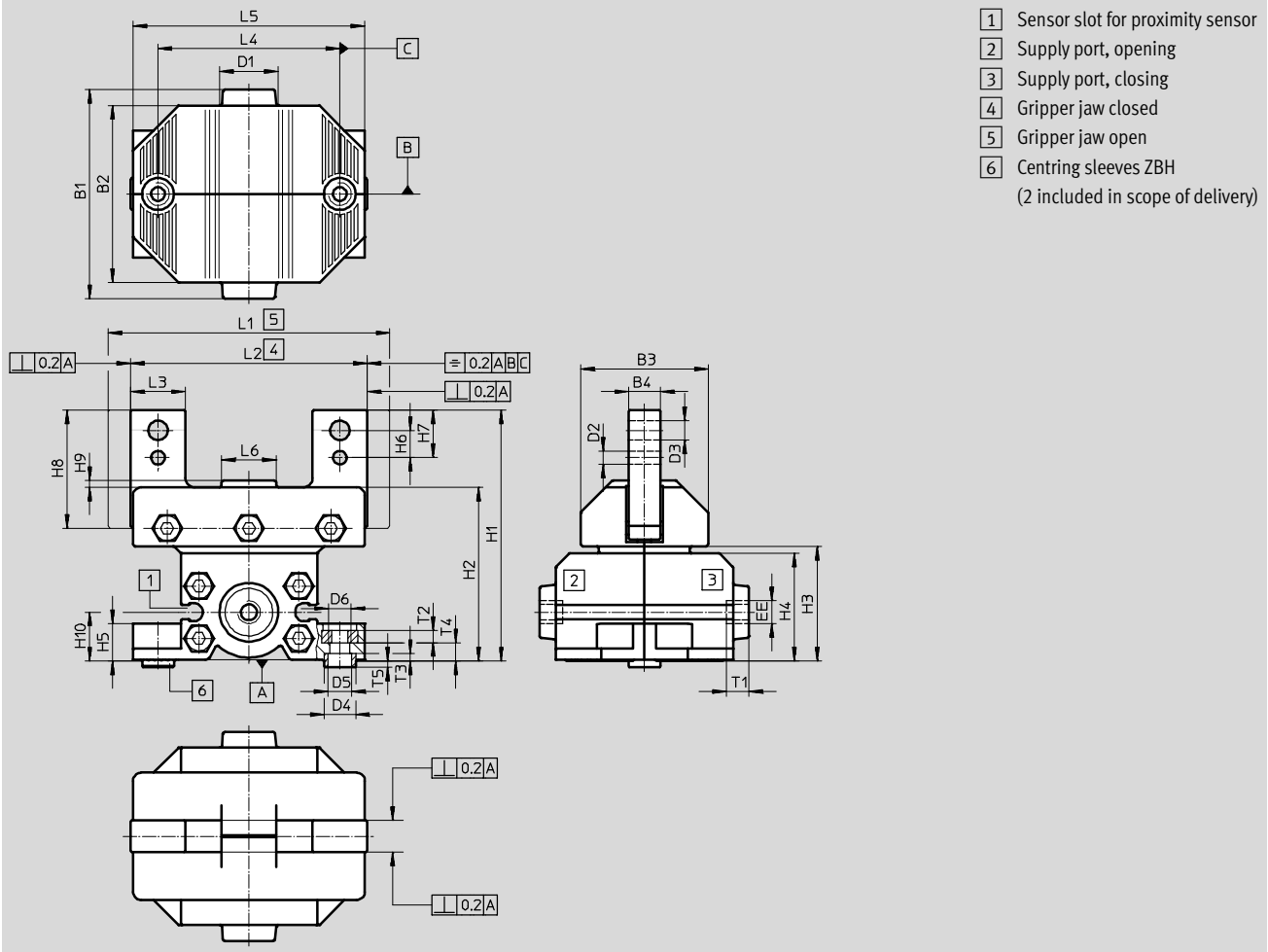
# Parallel grippers HGPC

Technical data

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## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)



| Size | B1 | B2 | B3   | B4   | D1 | D2                         | D3   | D4          | D5  | D6 |
|------|----|----|------|------|----|----------------------------|------|-------------|-----|----|
| [mm] |    |    |      | ±0.1 |    |                            | ±0.1 | Ø<br>F10/h7 | Ø   |    |
| 12   | 38 | 33 | 22.4 | 6    | 12 | 2.5 <sup>+0.04/+0.01</sup> | 3.3  | 7           | 5.3 | M4 |
| 16   | 46 | 39 | 28   | 7    | 12 | 3 <sup>H8</sup>            | 4.3  | 7           | 5.3 | M5 |
| 20   | 57 | 50 | 35   | 8    | 12 | 4 <sup>H8</sup>            | 5.3  | 9           | 6.4 | M6 |

| Size | EE | H1   | H2   | H3   | H4   | H5   | H6                      | H7                      | H8   | H9  | H10  |
|------|----|------|------|------|------|------|-------------------------|-------------------------|------|-----|------|
| [mm] |    | ±0.5 |      |      |      |      |                         |                         | -0.2 |     |      |
| 12   | M5 | 48.2 | 33.6 | 21.7 | 20.2 | 6.9  | 5 <sup>+0.05/-0.1</sup> | 9 <sup>+0.05/-0.1</sup> | 25   | 1.2 | 9.2  |
| 16   | M5 | 55.2 | 38.2 | 25.2 | 23.7 | 8.2  | 6±0.1                   | 10.5±0.4                | 28.5 | 1.5 | 10.7 |
| 20   | M5 | 68.7 | 48.2 | 32.5 | 30.5 | 10.2 | 7.5±0.1                 | 13±0.4                  | 34.5 | 1.5 | 13.7 |

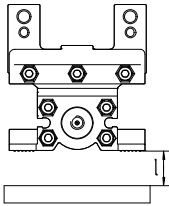
| Size | L1   | L2   | L3                        | L4 <sup>1)</sup> | L5 | L6 | T1   | T2  | T3   | T4           | T5           |
|------|------|------|---------------------------|------------------|----|----|------|-----|------|--------------|--------------|
| [mm] | ±0.5 | ±0.5 |                           |                  |    |    | min. |     | ±0.1 | +0.4<br>-0.3 | +0.1<br>-0.3 |
| 12   | 45   | 39   | 10 <sup>-0.02/-0.06</sup> | 33               | 42 | 10 | 4.5  | 2.2 | 1.7  | 3.1          | 1.3          |
| 16   | 62   | 52   | 12 <sup>-0.05</sup>       | 40               | 51 | 12 | 4.5  | 2.7 | 1.8  | 3.8          | 1.2          |
| 20   | 77   | 63   | 14 <sup>-0.05</sup>       | 50               | 65 | 16 | 4.5  | 3.2 | 2.3  | 5.2          | 1.7          |

1) Tolerance for centring hole ±0.03  
 Tolerance for thread ±0.1

# Parallel grippers HGPC

Technical data

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| Minimum distance l between gripper and ferritic object |      |    |    |
|--------------------------------------------------------|------|----|----|
|                                                        | 12   | 16 | 20 |
| Distance                                               | [mm] | 10 |    |

| Ordering data |      |                                             |           |                                                           |
|---------------|------|---------------------------------------------|-----------|-----------------------------------------------------------|
|               | Size | Double-acting<br>Without compression spring |           | Single-acting or with gripping force retention<br>Closing |
|               | [mm] | Part No.                                    | Type      | Part No. Type                                             |
|               | 12   | 539 267                                     | HGPC-12-A | 539 268 HGPC-12-A-G2                                      |
|               | 16   | 539 269                                     | HGPC-16-A | 539 270 HGPC-16-A-G2                                      |
|               | 20   | 539 271                                     | HGPC-20-A | 539 272 HGPC-20-A-G2                                      |
|               |      |                                             |           |                                                           |

# Parallel grippers HGPC

Accessories

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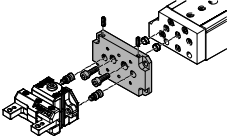
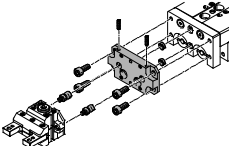
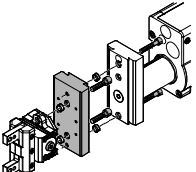
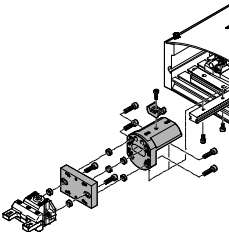
## Adapter kit HAPG

Material:  
Wrought aluminium alloy  
Free of copper and PTFE  
RoHS-compliant



Note

The kit includes the individual mounting interface as well as the necessary mounting material.

| Permissible drive/gripper combinations with adapter kit                             |        |         |                                                                                   |                                                                                   | Download CAD data → <a href="http://www.festo.com">www.festo.com</a> |          |           |
|-------------------------------------------------------------------------------------|--------|---------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------|----------|-----------|
| Combination                                                                         | Drive  | Gripper |                                                                                   |                                                                                   | Adapter kit                                                          |          |           |
|                                                                                     | Size   | Size    | Mounting option                                                                   |                                                                                   | CRC <sup>1)</sup>                                                    | Part No. | Type      |
|                                                                                     |        |         |  |  |                                                                      |          |           |
| DGSL/HGPC                                                                           | DGSL   | HGPC    |                                                                                   |                                                                                   | HAPG                                                                 |          |           |
|    | 12, 16 | 12      | ■                                                                                 | ■                                                                                 | 2                                                                    | 529018   | HAPG-58   |
|                                                                                     | 20, 25 | 16      | ■                                                                                 | ■                                                                                 |                                                                      | 191267   | HAPG-49   |
|                                                                                     | 20, 25 | 20      | ■                                                                                 | ■                                                                                 |                                                                      | 191269   | HAPG-51   |
|                                                                                     |        |         |                                                                                   |                                                                                   |                                                                      |          |           |
| SLT/HGPC                                                                            | SLT    | HGPC    |                                                                                   |                                                                                   | HAPG                                                                 |          |           |
|   | 10     | 12      | ■                                                                                 | –                                                                                 | 2                                                                    | 542670   | HAPG-100  |
|                                                                                     | 16     | 12      | ■                                                                                 | –                                                                                 |                                                                      | 529018   | HAPG-58   |
|                                                                                     | 16     | 16      | ■                                                                                 | –                                                                                 |                                                                      | 542666   | HAPG-101  |
|                                                                                     | 20     | 16      | ■                                                                                 | –                                                                                 |                                                                      | 191267   | HAPG-49   |
|                                                                                     | 20     | 20      | ■                                                                                 | –                                                                                 |                                                                      | 542667   | HAPG-102  |
|                                                                                     | 25     | 20      | ■                                                                                 | –                                                                                 |                                                                      | 191269   | HAPG-51   |
|                                                                                     |        |         |                                                                                   |                                                                                   |                                                                      |          |           |
| HMP/HGPC                                                                            | HMP    | HGPC    |                                                                                   |                                                                                   | HAPG                                                                 |          |           |
|  | 16     | 16      | –                                                                                 | ■                                                                                 | 2                                                                    | 191263   | HAPG-45   |
|                                                                                     | 20, 25 | 20      | –                                                                                 | ■                                                                                 |                                                                      | 191264   | HAPG-46   |
|                                                                                     |        |         |                                                                                   |                                                                                   |                                                                      |          |           |
| HSP/HGPC                                                                            | HSP    | HGPC    |                                                                                   |                                                                                   | HAPG                                                                 |          |           |
|  | 16     | 16      | ■                                                                                 | –                                                                                 | 2                                                                    | 191901   | HAPG-55   |
|                                                                                     |        |         |                                                                                   |                                                                                   |                                                                      | 540882   | HAPG-71-B |
|                                                                                     | 25     | 20      | ■                                                                                 | –                                                                                 |                                                                      | 191901   | HAPG-55   |
|                                                                                     |        |         |                                                                                   |                                                                                   |                                                                      | 540883   | HAPG-72-B |
|                                                                                     |        |         |                                                                                   |                                                                                   |                                                                      |          |           |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.


# Parallel grippers HGPC



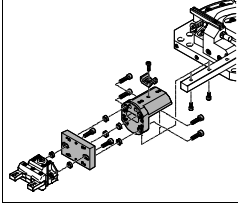
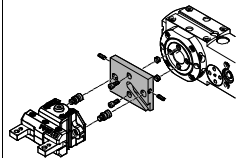
Accessories

**FESTO**

**Adapter kit  
HAPG**

Material:  
Wrought aluminium alloy  
Free of copper and PTFE  
RoHS-compliant

 **Note**  
The kit includes the individual mounting interface as well as the necessary mounting material.


| Permissible drive/gripper combinations with adapter kit                            |               |                 |                                                                                   |                                                                                   | Download CAD data ➔ <a href="http://www.festo.com">www.festo.com</a> |                  |                      |
|------------------------------------------------------------------------------------|---------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------|----------------------|
| Combination                                                                        | Drive<br>Size | Gripper<br>Size | Mounting option                                                                   |                                                                                   | Adapter kit<br>CRC <sup>1)</sup>                                     | Part No.         | Type                 |
|                                                                                    |               |                 |  |  |                                                                      |                  |                      |
|                                                                                    |               |                 |                                                                                   |                                                                                   |                                                                      |                  |                      |
| HSW/HGPC                                                                           | HSW           | HGPC            |                                                                                   |                                                                                   | HAPG                                                                 |                  |                      |
|   | 12, 16        | 16              | ■                                                                                 | –                                                                                 | 2                                                                    | 191901<br>540882 | HAPG-55<br>HAPG-71-B |
|                                                                                    |               |                 |                                                                                   |                                                                                   |                                                                      |                  |                      |
| ERMB/HGPC                                                                          | ERMB          | HGPC            |                                                                                   |                                                                                   | HAPG                                                                 |                  |                      |
|  | 20            | 16              | ■                                                                                 | ■                                                                                 | 2                                                                    | 542668           | HAPG-SD2-42          |
|                                                                                    | 20            | 20              | ■                                                                                 | ■                                                                                 |                                                                      | 542669           | HAPG-SD2-43          |
|                                                                                    | 25            | 20              | ■                                                                                 | ■                                                                                 |                                                                      | 542758           | HAPG-SD2-44          |
|                                                                                    |               |                 |                                                                                   |                                                                                   |                                                                      |                  |                      |

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.


# Parallel grippers HGPC


Accessories



**FESTO**

| Ordering data – Centring sleeves                                                  |                  |               |               | Technical data → Internet: zbh |                  |
|-----------------------------------------------------------------------------------|------------------|---------------|---------------|--------------------------------|------------------|
|                                                                                   | For size<br>[mm] | Weight<br>[g] | Part No.      | Type                           | PU <sup>1)</sup> |
|  | 12, 16           | 1             | <b>186717</b> | <b>ZBH-7</b>                   | 10               |
|                                                                                   | 20               | 1             | <b>150927</b> | <b>ZBH-9</b>                   | 10               |

1) Packaging unit

| Ordering data – Proximity sensors for C-slot                                      |                                      |                                                |                     |                     |                                |                            |
|-----------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------|---------------------|---------------------|--------------------------------|----------------------------|
|                                                                                   | Type of mounting                     | Electrical connection,<br>connection direction | Switching<br>output | Cable length<br>[m] | Part No.                       | Type                       |
|  | N/O contact, magneto-resistive       |                                                |                     |                     | Technical data → Internet: smt |                            |
|                                                                                   | Insertable in the slot from<br>above | Cable, 3-wire, in-line                         | PNP                 | 2.5                 | 551373                         | SMT-10M-PS-24V-E-2,5-L-OE  |
|                                                                                   |                                      | Plug M8x1, 3-pin, in-line                      |                     | 0.3                 | 551375                         | SMT-10M-PS-24V-E-0,3-L-M8D |
|                                                                                   | N/O contact, magnetic reed           |                                                |                     |                     | Technical data → Internet: sme |                            |
|                                                                                   | Insertable in the slot<br>lengthwise | Cable, 3-wire, in-line                         | Contacting          | 2.5                 | 173210                         | SME-10-KL-LED-24           |
|                                                                                   |                                      | Plug M8x1, 3-pin, in-line                      |                     | 0.3                 | 173212                         | SME-10-SL-LED-24           |

| Ordering data – Proximity sensors for C-slot                                        |                                      |                                                |                     |                     |                                |                            |
|-------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------|---------------------|---------------------|--------------------------------|----------------------------|
|                                                                                     | Type of mounting                     | Electrical connection,<br>connection direction | Switching<br>output | Cable length<br>[m] | Part No.                       | Type                       |
|  | N/O contact, magneto-resistive       |                                                |                     |                     | Technical data → Internet: smt |                            |
|                                                                                     | Insertable in the slot from<br>above | Cable, 3-wire, lateral                         | PNP                 | 2.5                 | 551374                         | SMT-10M-PS-24V-E-2,5-Q-OE  |
|                                                                                     |                                      | Plug M8x1, 3-pin, lateral                      |                     | 0.3                 | 551376                         | SMT-10M-PS-24V-E-0,3-Q-M8D |
|                                                                                     | N/O contact, magnetic reed           |                                                |                     |                     | Technical data → Internet: sme |                            |
|                                                                                     | Insertable in the slot<br>lengthwise | Cable, 3-wire, lateral                         | Contacting          | 2.5                 | 173211                         | SME-10-KQ-LED-24           |
|                                                                                     |                                      | Plug M8x1, 3-pin, lateral                      |                     | 0.3                 | 173213                         | SME-10-SQ-LED-24           |

| Ordering data – Connecting cables                                                   |                              |                              |                     | Technical data → Internet: nebu |                            |
|-------------------------------------------------------------------------------------|------------------------------|------------------------------|---------------------|---------------------------------|----------------------------|
|                                                                                     | Electrical connection, left  | Electrical connection, right | Cable length<br>[m] | Part No.                        | Type                       |
|  | Straight socket, M8x1, 3-pin | Cable, open end, 3-wire      | 2.5                 | <b>541333</b>                   | <b>NEBU-M8G3-K-2.5-LE3</b> |
|                                                                                     |                              |                              | 5                   | <b>541334</b>                   | <b>NEBU-M8G3-K-5-LE3</b>   |
|  | Angled socket, M8x1, 3-pin   | Cable, open end, 3-wire      | 2.5                 | <b>541338</b>                   | <b>NEBU-M8W3-K-2.5-LE3</b> |
|                                                                                     |                              |                              | 5                   | <b>541341</b>                   | <b>NEBU-M8W3-K-5-LE3</b>   |