

## Bellows grippers DHEB

**FESTO**



## Key features

### At a glance

When the supply port is pressurised, an internal piston is moved. The mechanism transfers the movement of the piston to the bellows, causing them to expand outwards.

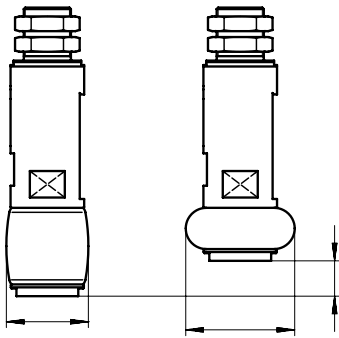
The increase in the bellows diameter enables the bellows to grasp loads from the inside. When the gripper is exhausted, the resetting force of the bellows pushes the piston back into its initial position.

- Single-acting internal gripper
- Optionally with internal through-hole
- Max. payload: 5.1 kg
- Operating range:  $\varnothing 8 \dots 85 \text{ mm}$
- Choice of two directions of bellows movement:
  - Upwards
  - Downwards
- Choice of two bellows materials:
  - Ethylene propylene rubber (EPDM)
  - Silicone
- Choice of two supply port variants:
  - At the side
  - At the rear

### The technology in detail

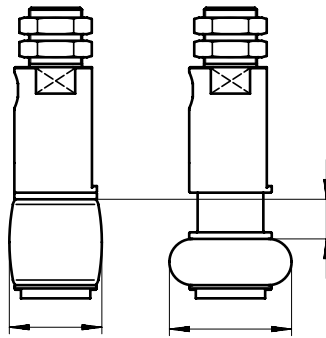
Direction of movement: upwards

Bellows exhausted/pressurised



Direction of movement: downwards

Bellows exhausted/pressurised



### Bellows material

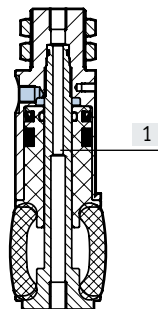
Silicone

EPDM

- Very good temperature resistance (wide range)
- Food-safe
- Longer service life than EPDM
- Contains paint-wetting impairment substances
- Higher friction coefficient than silicone
- Minimal marking of shiny surfaces

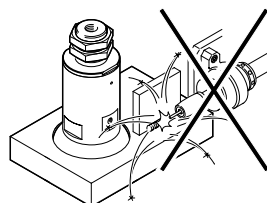
### Application examples

- Gentle internal gripping of fragile workpieces (e.g. glass or ceramics).
- Transporting and packaging of glasses, cups and bottles, for example
- The internal through-hole [1] (optional) enables the workpiece to be cooled, cleaned, checked for leaks or disinfected during the handling process

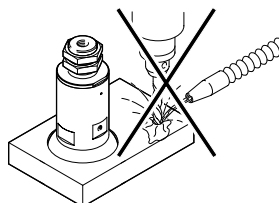


### Note

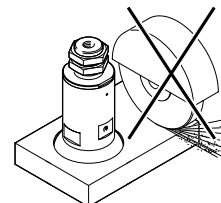
These grippers are not designed for the following applications:



- Welding spatter



- Machining
- Aggressive media

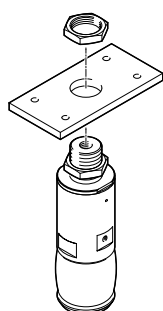


- Grinding dust

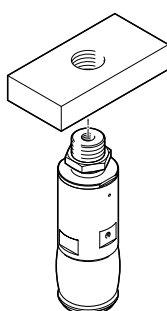
## Peripherals overview

## Mounting options

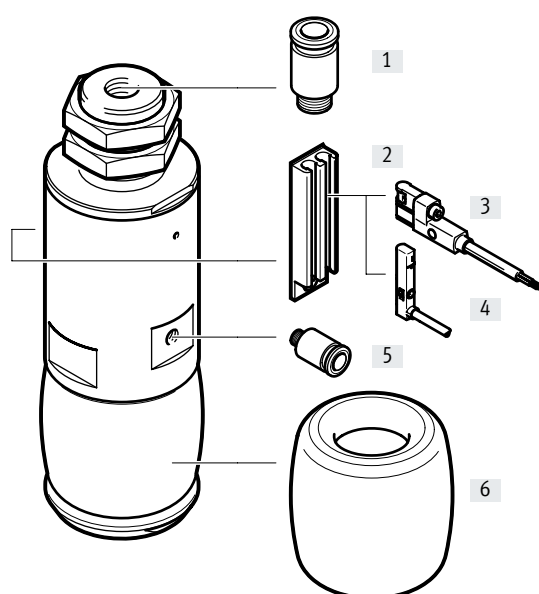
Through-hole



Threaded hole



## Peripherals overview



| Accessories                         |  |  |                 |
|-------------------------------------|--|--|-----------------|
| Type                                | Description  |  | → Page/Internet |
| [1] Push-in fitting<br>QS           | <ul style="list-style-type: none"> <li>For connecting tubing with standard O.D.</li> <li>In the variant with supply port at the side DHEB-...-P, this port (with internal through-hole) can be used to cool or clean the workpiece, for example, or to check it for leaks</li> <li>In the variant DHEB-...-P, this port is used to supply the gripper with compressed air</li> </ul> |  | qs              |
| [2] Sensor rail<br>DASP             | <ul style="list-style-type: none"> <li>For mounting the proximity sensors</li> <li>For size 27 ... 63</li> </ul>   |  | 11              |
| [3] Proximity sensor<br>SMT-10G     | <ul style="list-style-type: none"> <li>For sensing the piston position</li> <li>For size 27 ... 63</li> </ul>  |  | 12              |
| [4] Proximity sensor<br>SME-/SMT-10 | <ul style="list-style-type: none"> <li>For sensing the piston position</li> <li>For size 27 ... 63</li> </ul>  |  | 12              |
| [5] Push-in fitting<br>QS           | <ul style="list-style-type: none"> <li>For connecting tubing with standard O.D.</li> <li>In the variant with supply port at the side DHEB-...-L, this port is used to supply the gripper with compressed air</li> </ul>  |  | qs              |
| [6] Bellows<br>DHAS                 | <ul style="list-style-type: none"> <li>Can be replaced in the event of wear</li> </ul>   |  | -               |

Type codes

|             |                  |  |
|-------------|------------------|--|
| <b>001</b>  | <b>Series</b>    |  |
| <b>DHEB</b> | Bellows grippers |  |

|            |             |  |
|------------|-------------|--|
| <b>002</b> | <b>Size</b> |  |
| <b>8</b>   | 8           |  |
| <b>10</b>  | 10          |  |
| <b>12</b>  | 12          |  |
| <b>14</b>  | 14          |  |
| <b>18</b>  | 18          |  |
| <b>22</b>  | 22          |  |
| <b>27</b>  | 27          |  |
| <b>33</b>  | 33          |  |
| <b>41</b>  | 41          |  |
| <b>51</b>  | 51          |  |
| <b>63</b>  | 63          |  |

|            |                         |  |
|------------|-------------------------|--|
| <b>003</b> | <b>Gripper function</b> |  |
| <b>E</b>   | Single-acting           |  |

|            |                            |  |
|------------|----------------------------|--|
| <b>004</b> | <b>Actuation direction</b> |  |
| <b>D</b>   | Downwards                  |  |
| <b>U</b>   | Upwards                    |  |

|            |                         |  |
|------------|-------------------------|--|
| <b>005</b> | <b>Bellows material</b> |  |
| <b>E</b>   | EPDM                    |  |
| <b>S</b>   | Silicone                |  |

|            |  |  |
|------------|--|--|
| <b>006</b> | <b>Connection position</b>             |  |
| <b>L</b>   | In the direction of motion             |  |
| <b>P</b>   | Perpendicular to direction of movement |  |

## Data sheet

-  Size  
8 ... 63 mm
-  Diameter  
∅ 11 ... 85 mm

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

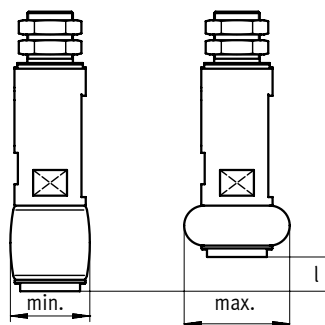
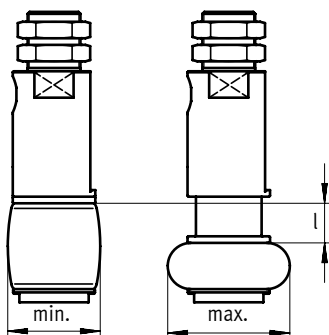

## General technical data

| Size   | 8   | 10  | 12   | 14   | 18   | 22   | 27   | 33  | 41  | 51   | 63   |  |
|--|---|-----|------|------|------|------|------|-----|---|------|------|--|
| Design                                       | Contracting diaphragm with forced motion sequence |     |      |      |      |      |      |     |   |      |      |  |
| Mode of operation                            | Single-acting, closed                             |     |      |      |      |      |      |     |   |      |      |  |
| Pneumatic connection                         |   |     |      |      |      |      |      |     |   |      |      |  |
| DHEB-...-P                                   | M3  | M3  | M3   | M3   | M5   | M5   | M5   | M5  | M5  | G1/8 | G1/8 |  |
| DHEB-...-L                                   | M5  | M5  | M5   | M5   | M5   | M5   | M5   | M5  | G1/8  | G1/8 | G1/8 |  |
| Guide value for payload [kg]                 | 0.08  | 0.1 | 0.12 | 0.15 | 0.21 | 0.32 | 0.45 | 0.7 | 1.2   | 2.5  | 5.1  |  |
| Max. operating frequency [Hz]                | ≤ 4   |     |      |      |      |      |      |     |   |      |      |  |
| Average replacement interval for the bellows |   |     |      |      |      |      |      |     |   |      |      |  |
| DHEB-...-S                                   | 1 million switching cycles                        |     |      |      |      |      |      |     |   |      |      |  |
| DHEB-...-E                                   | 0.5 million switching cycles                      |     |      |      |      |      |      |     |   |      |      |  |
| Position sensing                             | None  |     |      |      |      |      |      |     | Via proximity sensor, with sensor rail DASP |      |      |  |
| Type of mounting                             |   |     |      |      |      |      |      |     |   |      |      |  |
| With lock nut                                |   |     |      |      |      |      |      |     |   |      |      |  |
| With male thread                             |   |     |      |      |      |      |      |     |   |      |      |  |
| Mounting position                            | Any   |     |      |      |      |      |      |     |   |      |      |  |

## Diameter to be gripped, bellows stroke l

DHEB-...-D

DHEB-...-U



| Size                          | 8   | 10   | 12  | 14   | 18   | 22   | 27 | 33   | 41   | 51 | 63 |
|-------------------------------|-----|------|-----|------|------|------|----|------|------|----|----|
| min. (±1 mm) [mm]             | 8   | 10.5 | 13  | 15   | 19.5 | 24   | 28 | 34   | 42   | 54 | 66 |
| max. (±1 mm) [mm]             | 11  | 14   | 17  | 19.5 | 25   | 31.5 | 37 | 45   | 54   | 68 | 85 |
| Bellows stroke (±0.5 mm) [mm] | 3.5 | 4    | 5.5 | 7    | 7.5  | 12   | 12 | 14.5 | 15.5 | 18 | 25 |

## Weight [g]

| Size       | 8  | 10 | 12 | 14 | 18 | 22 | 27  | 33  | 41  | 51  | 63  |
|------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|
| DHEB-...-D | 15 | 16 | 17 | 17 | 28 | 43 | 79  | 118 | 280 | 490 | 800 |
| DHEB-...-U | 16 | 17 | 18 | 20 | 35 | 50 | 100 | 130 | 300 | 500 | 785 |

Data sheet

| Operating and environmental conditions       |       | 8  | 10 | 12 | 14 | 18 | 22 | 27 | 33 | 41 | 51 | 63 |  |
|--|-------|--|----|----|----|----|----|----|----|----|----|----|--|
| Size   |       |  |    |    |    |    |    |    |    |    |    |    |  |
| Min. operating pressure                      | [bar] | 5  |    |    |    |    |    |    | 4  |    |    |    |  |
| Max. operating pressure                      | [bar] | 8  |    |    |    |    |    |    |    |    |    |    |  |
| Reset pressure                               | [bar] | ≤ 1  |    |    |    |    |    |    |    |    |    |    |  |
| Operating medium                             |       | Compressed air to ISO 8573-1:2010 [7:4:4]  |    |    |    |    |    |    |    |    |    |    |  |
| Note on the operating/pilot medium           |       | Lubricated operation possible (in which case lubricated operation will always be required) |    |    |    |    |    |    |    |    |    |    |  |
| Ambient temperature <sup>1)</sup>            |       |  |    |    |    |    |    |    |    |    |    |    |  |
| Gripper                                      | [°C]  | +5 ... +60   |    |    |    |    |    |    |    |    |    |    |  |
| EPDM bellows                                 | [°C]  | -30 ... +120   |    |    |    |    |    |    |    |    |    |    |  |
| Silicone bellows                             | [°C]  | -40 ... +150   |    |    |    |    |    |    |    |    |    |    |  |
| Food-safe <sup>2)</sup>                      |       |  |    |    |    |    |    |    |    |    |    |    |  |
| DHEB-...S                                    |       | → supplementary information on materials   |    |    |    |    |    |    |    |    |    |    |  |
| Corrosion resistance class CRC <sup>3)</sup> |       | 2  |    |    |    |    |    |    |    |    |    |    |  |

1) Note operating range of proximity sensors

2) Additional information is available at [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

3) Corrosion resistance class CRC 2 to Festo standard FN 940070

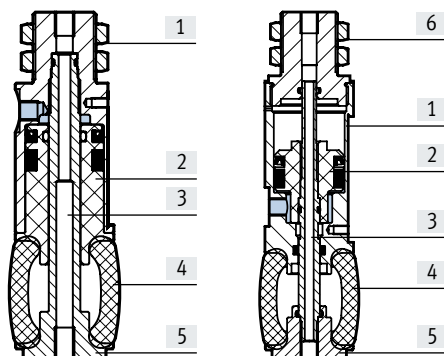
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements in direct contact with a normal industrial environment.

Materials

Sectional view

DHEB-...-D

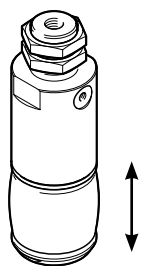
DHEB-...-U



Bellows grippers

|     |                   |  |
|-----|-------------------|--|
| [1] | Housing           | Hard-anodised aluminium                      |
| [2] | Piston            |  |
|     | DHEB-...-D        | Polyacetal                                   |
|     | DHEB-...-U        | Hard-anodised aluminium                      |
| [3] | Piston rod        | Hard-anodised aluminium                      |
| [4] | Bellows           |  |
|     | DHEB-...-S        | Silicone (milky, transparent, natural)       |
|     | DHEB-...-E        | EPDM (ethylene propylene rubber, black)      |
| [5] | Cover             | Hard-anodised aluminium                      |
| [6] | Cover             | Hard-anodised aluminium                      |
| -   | Note on materials | Contains paint-wetting impairment substances |
|     |                   | RoHS-compliant                               |

Opening and closing times [ms] at 6 bar



The indicated opening and closing times [ms] were measured at room temperature and 6 bar operating pressure with a vertically mounted gripper. The times refer to the gripper without load.

Depending on the design variant, the expansion of the bellows is defined as the opening time and the reset as the closing time.

| Size    | 8  | 10 | 12 | 14 | 18 | 22 | 27 | 33 | 41 | 51 | 63  |
|---------|----|----|----|----|----|----|----|----|----|----|-----|
| Open    | 10 | 20 | 20 | 20 | 20 | 30 | 30 | 30 | 30 | 30 | 40  |
| Closing | 30 | 40 | 40 | 40 | 50 | 60 | 60 | 60 | 70 | 70 | 100 |

## Data sheet

### Holding force/slip force F at 6 bar as a function of diameter d and actuation direction of the gripper

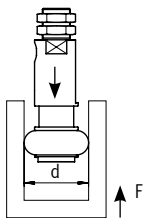
The forces depend on the following factors:

- Diameter of the workpiece to be held
- Actuation direction of the gripper
- Surface texture
- Coefficients of friction
- Operating pressure

#### Application 1

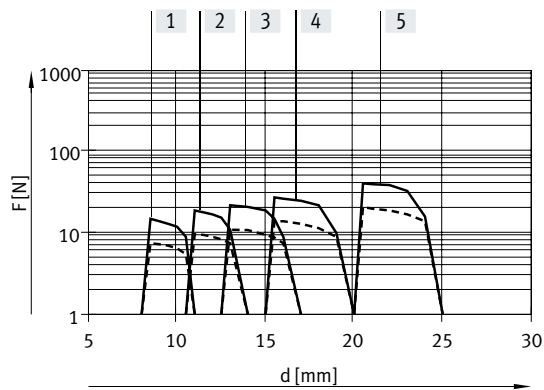
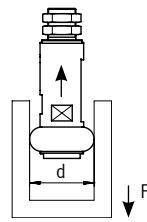
DHEB-...-D

- Actuation direction downwards
- Workpiece pushing



DHEB-...-U

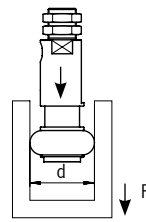
- Actuation direction upwards
- Workpiece pulling



#### Application 2

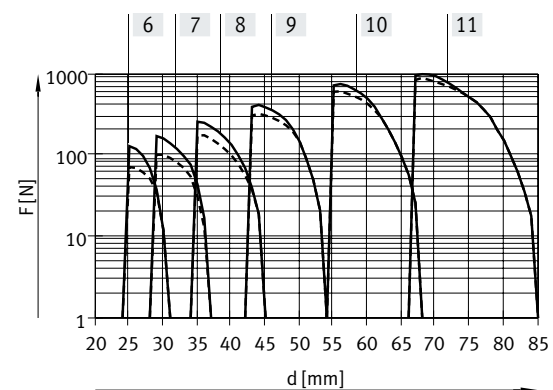
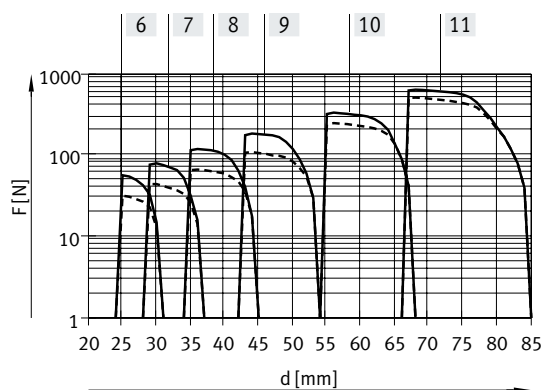
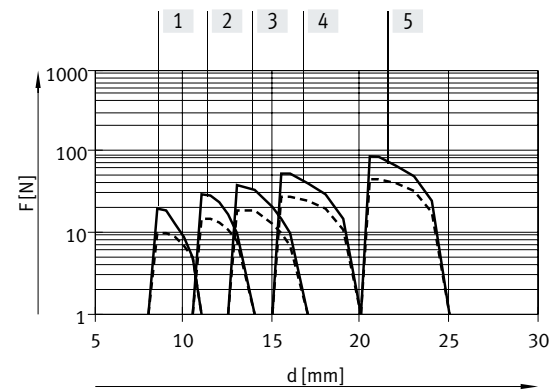
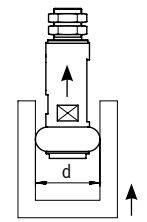
DHEB-...-D

- Actuation direction downwards
- Workpiece pulling



DHEB-...-U

- Actuation direction upwards
- Workpiece pushing



- [1] Size 8
- [2] Size 10
- [3] Size 12
- [4] Size 14
- [5] Size 18
- [6] Size 22

- [7] Size 27
- [8] Size 33
- [9] Size 41
- [10] Size 51
- [11] Size 63

— Material: EPDM  
 - - - - - Material: Silicone

**Note**  
 A tolerance of  $\pm 1$  mm must be noted with diameter d.

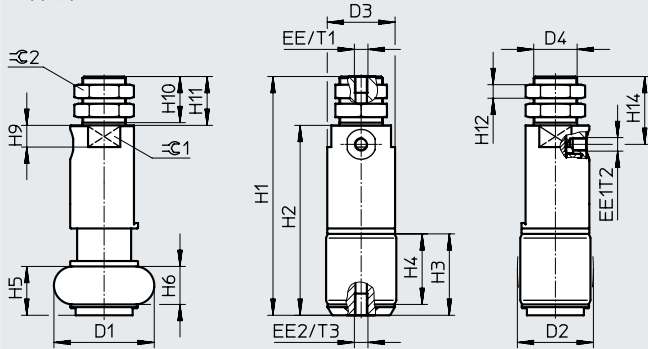
Data sheet

Dimensions

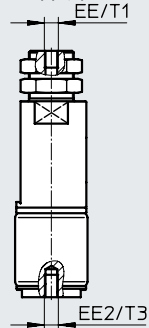
Download CAD data → [www.festo.com](http://www.festo.com)

DHEB-...-D – Actuation direction: downwards

DHEB-...-D-...-P  
Supply port at the side

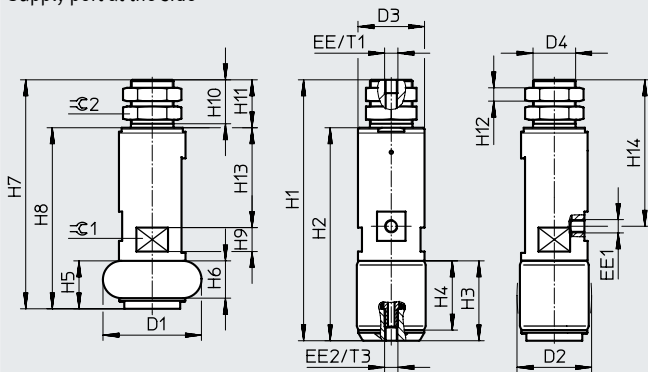


DHEB-...-D-...-L  
Supply port on top

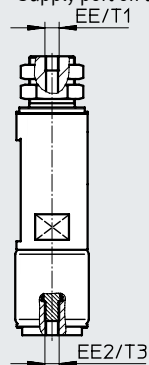


DHEB-...-U – Actuation direction: upwards

DHEB-...-U-...-P  
Supply port at the side



DHEB-...-U-...-L  
Supply port on top



| Size | D1<br>∅ | D2<br>∅ | D3<br>∅ | D4         |            | EE   | EE1  | EE2  | H1               |                  |
|------|---------|---------|---------|------------|------------|------|------|------|------------------|------------------|
|      |         |         |         | DHEB-...-D | DHEB-...-U |      |      |      | DHEB-...-D<br>±1 | DHEB-...-U<br>±1 |
| 8    | 11      | 8       | 14      | M10x1      | M10x1      | M5   | M3   | M2   | 52.7             | 57.5             |
| 10   | 14      | 10.5    | 14      | M10x1      | M10x1      | M5   | M3   | M2   | 54.2             | 58.8             |
| 12   | 17      | 13      | 14      | M12x1      | M10x1      | M5   | M3   | M3   | 55.5             | 60.5             |
| 14   | 19.5    | 15      | 14      | M12x1      | M10x1      | M5   | M3   | M3   | 55.8             | 64               |
| 18   | 25      | 19.5    | 18      | M12x1      | M12x1      | M5   | M5   | M3   | 65               | 72.5             |
| 22   | 31.5    | 24      | 21.5    | M14x1      | M14x1      | M5   | M5   | M3   | 75.5             | 82               |
| 27   | 37      | 28      | 25      | M16x1      | M16x1      | M5   | M5   | M5   | 88               | 98               |
| 33   | 45      | 34      | 30      | M22x1.5    | M22x1.5    | G1/8 | M5   | G1/8 | 109              | 116              |
| 41   | 54      | 42      | 40      | M22x1.5    | M22x1.5    | G1/8 | M5   | G1/8 | 126.5            | 131              |
| 51   | 68      | 54      | 50      | M26x1.5    | M26x1.5    | G1/8 | G1/8 | G1/8 | 159              | 160              |
| 63   | 85      | 66      | 60      | M26x1.5    | M26x1.5    | G1/8 | G1/8 | G1/8 | 189              | 185              |



## Data sheet

| Size<br>[mm] | H2               |                  | H3   | H4   | H5   | H6 | H7    | H8   |
|--------------|------------------|------------------|------|------|------|----|-------|------|
|              | DHEB-...-D<br>±1 | DHEB-...-U<br>±1 |      |      |      |    |       |      |
| 8            | 39.7             | 44.5             | 9.2  | 7    | 5.2  | 3  | 53.5  | 40.5 |
| 10           | 41.2             | 45.5             | 10.7 | 8.5  | 6.2  | 4  | 54    | 41   |
| 12           | 42.5             | 47.5             | 13   | 10.5 | 7.5  | 5  | 55    | 42   |
| 14           | 42.8             | 51               | 15.8 | 13   | 8.8  | 6  | 57    | 44   |
| 18           | 51               | 58.5             | 19.5 | 16.5 | 12   | 9  | 65    | 51   |
| 22           | 60.5             | 67               | 24.2 | 21   | 14.2 | 11 | 72    | 57   |
| 27           | 70               | 80               | 30.5 | 26.5 | 18   | 14 | 86    | 68   |
| 33           | 84               | 91               | 37   | 32.5 | 22.5 | 18 | 101.5 | 76.5 |
| 41           | 101.5            | 106              | 45   | 39.5 | 29.5 | 24 | 115.5 | 90.5 |
| 51           | 127              | 128              | 55   | 48   | 37   | 30 | 142   | 110  |
| 63           | 157              | 153              | 70   | 61   | 45   | 36 | 160   | 128  |

| Size<br>[mm] | H9         |            | H10              |                  | H11 | H12        |            | H13   | H14                |                    |
|--------------|------------|------------|------------------|------------------|-----|------------|------------|-------|--------------------|--------------------|
|              | DHEB-...-D | DHEB-...-U | DHEB-...-D<br>±1 | DHEB-...-U<br>±1 |     | DHEB-...-D | DHEB-...-U |       | DHEB-...-D<br>±0.5 | DHEB-...-U<br>±0.5 |
| 8            | 6          | –          | 12               | 12               | 13  | 3.5        | 3.5        | 21    | 17.5               | 35.5               |
| 10           | 6          | –          | 12               | 12               | 13  | 3.5        | 3.5        | 21.55 | 17.5               | 36                 |
| 12           | 6          | –          | 12               | 12               | 13  | 4          | 3.5        | 22.4  | 17.5               | 36.5               |
| 14           | 6          | 6          | 12               | 12               | 13  | 4          | 3.5        | 26.2  | 17.5               | 38.2               |
| 18           | 6          | 7          | 13               | 13               | 14  | 4          | 4          | 29    | 19.3               | 42                 |
| 22           | 7          | 8          | 14               | 14               | 15  | 5          | 5          | 31.8  | 21                 | 46.5               |
| 27           | 8          | 9          | 17               | 16.5             | 18  | 5          | 5          | 37.5  | 25                 | 55                 |
| 33           | 8          | 10         | 24               | 23.5             | 25  | 6          | 6          | 40.5  | 31.5               | 65                 |
| 41           | 11         | 12         | 23.5             | 23.5             | 25  | 6          | 6          | 45    | 32.5               | 70                 |
| 51           | 13         | 14         | 30               | 30               | 32  | 8          | 8          | 54    | 42.5               | 88.5               |
| 63           | 16         | 16         | 30               | 30               | 32  | 8          | 8          | 62    | 46                 | 96.5               |

| Size<br>[mm] | T1               |                  | T2<br>min. | T3                 |                    | =G1        |            | =G2        |            |
|--------------|------------------|------------------|------------|--------------------|--------------------|------------|------------|------------|------------|
|              | DHEB-...-D<br>±2 | DHEB-...-U<br>±2 |            | DHEB-...-D<br>min. | DHEB-...-U<br>min. | DHEB-...-D | DHEB-...-U | DHEB-...-D | DHEB-...-U |
| 8            | 5                | 5                | –          | 3.5                | 3.5                | 13         | 13         | 13         | 13         |
| 10           | 5                | 5                | –          | 3.5                | 3.5                | 13         | 13         | 13         | 13         |
| 12           | 5                | 5                | –          | 4                  | 4                  | 13         | 13         | 15         | 13         |
| 14           | 5                | 5                | –          | 4                  | 4                  | 13         | 13         | 15         | 13         |
| 18           | 5                | 5                | –          | 4                  | 4                  | 16         | 16         | 15         | 15         |
| 22           | 5                | 5                | –          | 5                  | 5                  | 19         | 20         | 17         | 17         |
| 27           | 5                | 5                | 5          | 8                  | –                  | 22         | 22         | 19         | 19         |
| 33           | 8                | 8                | 5          | 8                  | 7                  | 28         | 27         | 27         | 27         |
| 41           | 8                | 8                | 6          | 7                  | –                  | 36         | 36         | 27         | 27         |
| 51           | 8                | 9                | 8          | –                  | –                  | 45         | 45         | 32         | 32         |
| 63           | 10               | 10               | 8          | –                  | –                  | 54         | 54         | 32         | 32         |

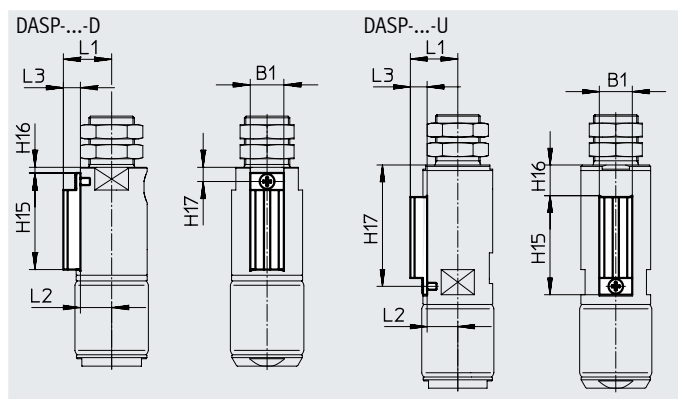
## Data sheet

| Ordering data – Actuation direction: downwards      |                              |                 |          |                 |
|---|------------------------------|-----------------|----------|-----------------|
| Size<br>[mm]  | Bellows material<br>Silicone |                 | EPDM     |                 |
|   | Part no.                     | Type            | Part no. | Type            |
| <b>Supply port: on top</b>                          |                              |                 |          |                 |
| 8   | 1320754                      | DHEB-8-E-D-S-L  | 1320765  | DHEB-8-E-D-E-L  |
| 10  | 1320755                      | DHEB-10-E-D-S-L | 1320766  | DHEB-10-E-D-E-L |
| 12  | 1320756                      | DHEB-12-E-D-S-L | 1320767  | DHEB-12-E-D-E-L |
| 14  | 1320757                      | DHEB-14-E-D-S-L | 1320768  | DHEB-14-E-D-E-L |
| 18  | 1320758                      | DHEB-18-E-D-S-L | 1320769  | DHEB-18-E-D-E-L |
| 22  | 1320759                      | DHEB-22-E-D-S-L | 1320770  | DHEB-22-E-D-E-L |
| 27  | 1320760                      | DHEB-27-E-D-S-L | 1320771  | DHEB-27-E-D-E-L |
| 33  | 1320761                      | DHEB-33-E-D-S-L | 1320772  | DHEB-33-E-D-E-L |
| 41  | 1320762                      | DHEB-41-E-D-S-L | 1320773  | DHEB-41-E-D-E-L |
| 51  | 1320763                      | DHEB-51-E-D-S-L | 1320774  | DHEB-51-E-D-E-L |
| 63  | 1320764                      | DHEB-63-E-D-S-L | 1320775  | DHEB-63-E-D-E-L |
| <b>Supply port: at the side</b>                     |                              |                 |          |                 |
| 8   | 1320776                      | DHEB-8-E-D-S-P  | 1320787  | DHEB-8-E-D-E-P  |
| 10  | 1320777                      | DHEB-10-E-D-S-P | 1320788  | DHEB-10-E-D-E-P |
| 12  | 1320778                      | DHEB-12-E-D-S-P | 1320789  | DHEB-12-E-D-E-P |
| 14  | 1320779                      | DHEB-14-E-D-S-P | 1320790  | DHEB-14-E-D-E-P |
| 18  | 1320780                      | DHEB-18-E-D-S-P | 1320791  | DHEB-18-E-D-E-P |
| 22  | 1320781                      | DHEB-22-E-D-S-P | 1320792  | DHEB-22-E-D-E-P |
| 27  | 1320782                      | DHEB-27-E-D-S-P | 1320793  | DHEB-27-E-D-E-P |
| 33  | 1320783                      | DHEB-33-E-D-S-P | 1320794  | DHEB-33-E-D-E-P |
| 41  | 1320784                      | DHEB-41-E-D-S-P | 1320795  | DHEB-41-E-D-E-P |
| 51  | 1320785                      | DHEB-51-E-D-S-P | 1320796  | DHEB-51-E-D-E-P |
| 63  | 1320786                      | DHEB-63-E-D-S-P | 1320797  | DHEB-63-E-D-E-P |
| <b>Ordering data – Actuation direction: upwards</b> |                              |                 |          |                 |
| Size<br>[mm]  | Bellows material<br>Silicone |                 | EPDM     |                 |
|   | Part no.                     | Type            | Part no. | Type            |
| <b>Supply port: on top</b>                          |                              |                 |          |                 |
| 8   | 1320798                      | DHEB-8-E-U-S-L  | 1320809  | DHEB-8-E-U-E-L  |
| 10  | 1320799                      | DHEB-10-E-U-S-L | 1320810  | DHEB-10-E-U-E-L |
| 12  | 1320800                      | DHEB-12-E-U-S-L | 1320811  | DHEB-12-E-U-E-L |
| 14  | 1320801                      | DHEB-14-E-U-S-L | 1320812  | DHEB-14-E-U-E-L |
| 18  | 1320802                      | DHEB-18-E-U-S-L | 1320813  | DHEB-18-E-U-E-L |
| 22  | 1320803                      | DHEB-22-E-U-S-L | 1320814  | DHEB-22-E-U-E-L |
| 27  | 1320804                      | DHEB-27-E-U-S-L | 1320815  | DHEB-27-E-U-E-L |
| 33  | 1320805                      | DHEB-33-E-U-S-L | 1320816  | DHEB-33-E-U-E-L |
| 41  | 1320806                      | DHEB-41-E-U-S-L | 1320817  | DHEB-41-E-U-E-L |
| 51  | 1320807                      | DHEB-51-E-U-S-L | 1320818  | DHEB-51-E-U-E-L |
| 63  | 1320808                      | DHEB-63-E-U-S-L | 1320819  | DHEB-63-E-U-E-L |
| <b>Supply port: at the side</b>                     |                              |                 |          |                 |
| 8   | 1320820                      | DHEB-8-E-U-S-P  | 1320831  | DHEB-8-E-U-E-P  |
| 10  | 1320821                      | DHEB-10-E-U-S-P | 1320832  | DHEB-10-E-U-E-P |
| 12  | 1320822                      | DHEB-12-E-U-S-P | 1320833  | DHEB-12-E-U-E-P |
| 14  | 1320823                      | DHEB-14-E-U-S-P | 1320834  | DHEB-14-E-U-E-P |
| 18  | 1320824                      | DHEB-18-E-U-S-P | 1320835  | DHEB-18-E-U-E-P |
| 22  | 1320825                      | DHEB-22-E-U-S-P | 1320836  | DHEB-22-E-U-E-P |
| 27  | 1320826                      | DHEB-27-E-U-S-P | 1320837  | DHEB-27-E-U-E-P |
| 33  | 1320827                      | DHEB-33-E-U-S-P | 1320838  | DHEB-33-E-U-E-P |
| 41  | 1320828                      | DHEB-41-E-U-S-P | 1320839  | DHEB-41-E-U-E-P |
| 51  | 1320829                      | DHEB-51-E-U-S-P | 1320840  | DHEB-51-E-U-E-P |
| 63  | 1320830                      | DHEB-63-E-U-S-P | 1320841  | DHEB-63-E-U-E-P |

## Accessories

## Sensor rail DASP


Material:  
Anodised wrought aluminium alloy  
Copper/PTFE-free  
RoHS-compliant

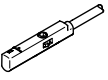
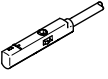



## Dimensions and ordering data

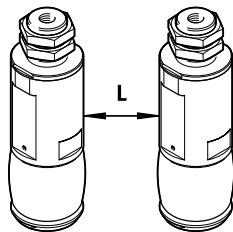
| For size   | B1   | H15  | H16  | H17  | L1   | L2   | L3 | Weight | Part no. | Type           |
|--|------|------|------|------|------|------|----|--------|----------|----------------|
| [mm]   |      |      |      |      |      |      |    | [g]    |          |                |
| <b>For bellows gripper DHEB....-D (direction of movement: downwards)</b> |      |      |      |      |      |      |    |        |          |                |
| 27   | 11.8 | 34.5 | 2    | 5    | 17   | 11   | 6  | 4      | 1329132  | DASP-G3-27-C-D |
| 33   | 11.8 | 41   | 2    | 5    | 19.7 | 13.7 | 6  | 5      | 1325616  | DASP-G3-33-C-D |
| 41   | 11.8 | 47   | 3    | 6    | 23.8 | 17.8 | 6  | 5      | 1355309  | DASP-G3-41-C-D |
| 51   | 11.8 | 55.5 | 7    | 10   | 28.5 | 22.5 | 6  | 6      | 1356949  | DASP-G3-51-C-D |
| 63   | 11.8 | 61   | 11   | 14   | 33.5 | 27.5 | 6  | 7      | 1359395  | DASP-G3-63-C-D |
| <b>For bellows gripper DHEB....-U (direction of movement: upwards)</b>   |      |      |      |      |      |      |    |        |          |                |
| 27   | 11.8 | 34.5 | 12   | 43.5 | 17   | 11   | 6  | 4      | 1329142  | DASP-G3-27-C-U |
| 33   | 11.8 | 39.5 | 11   | 47.5 | 19.8 | 13.8 | 6  | 5      | 1323641  | DASP-G3-33-C-U |
| 41   | 11.8 | 43   | 13.5 | 53.5 | 23.8 | 17.8 | 6  | 5      | 1355307  | DASP-G3-41-C-U |
| 51   | 11.8 | 45.5 | 17   | 59.5 | 28.5 | 22.5 | 6  | 6      | 1356889  | DASP-G3-51-C-U |
| 63   | 11.8 | 51.5 | 20   | 68.5 | 33.5 | 27.5 | 6  | 7      | 1359219  | DASP-G3-63-C-U |

Accessories



| Ordering data – Proximity sensor for C-slot, magneto-resistive                   |                                 |   |                  |                  |          | Data sheets → Internet: smt |
|--|---------------------------------|---|------------------|------------------|----------|-----------------------------|
|  | Type of mounting                | Electrical connection, outlet direction of connection | Switching output | Cable length [m] | Part no. | Type                        |
| <b>N/O contact</b>   |                                 |   |                  |                  |          |                             |
|  | Inserted in the slot lengthwise | Cable, 3-wire, lateral                                | PNP              | 2.5              | 547862   | SMT-10G-PS-24V-E-2.5Q-OE    |
|  |                                 | Plug M8x1, 3-pin, lateral                             |                  | 0.3              | 547863   | SMT-10G-PS-24V-E-0.3Q-M8D   |
|  |                                 | Cable, 3-wire, lateral                                | NPN              | 2.5              | 8065030  | SMT-10G-NS-24V-E-2.5Q-OE    |
|  |                                 | Plug M8x1, 3-pin, lateral                             |                  | 0.3              | 8065029  | SMT-10G-NS-24V-E-0.3Q-M8D   |

| Ordering data – Proximity sensor for C-slot                                      |                                 |   |                  |                  |          | Data sheets → Internet: smt |
|--|---------------------------------|---|------------------|------------------|----------|-----------------------------|
|  | Type of mounting                | Electrical connection, outlet direction of connection | Switching output | Cable length [m] | Part no. | Type                        |
| <b>N/O contact, magneto-resistive</b>  |                                 |   |                  |                  |          |                             |
|  | Inserted in the slot from above | Cable, 3-wire, lengthwise                             | 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  |
| <b>N/O contact, magnetic reed</b>  |                                 |   |                  |                  |          |                             |
|  | Inserted in the slot lengthwise | Cable, 3-wire, lengthwise                             | Contacting       | 2.5              | 173210   | SME-10-KL-LED-24            |
|  |                                 | Plug M8x1, 3-pin, in-line                             |                  | 0.3              | 173212   | SME-10-SL-LED-24            |

 **Note**  
When using proximity sensors, ferritic parts (e.g. retaining screws) can cause interference. A minimum distance must therefore be adhered to between the grippers.



| Size                  | 27 | 33 | 41 | 51 | 63 |
|-----------------------|----|----|----|----|----|
| Minimum distance [mm] | 20 | 20 | 30 | 15 | 15 |

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