

## Round cylinders DSNU

# FESTO



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## Key features

### At a glance

DSNU-8 ... 63

- Stainless steel piston rod
- Good running performance and long service life
- Piston rod with male and female thread

- Extensive range of accessories makes it possible to install the cylinder virtually anywhere

DSNU-8 ... 25



- The basic versions conform to ISO 6432, variants are based on these standards

### Wide choice of variants

| DSNU   | DSNU-...-MA  | DSNU-...-MQ  | DSNU-...-MH  |
|--|--|--|--|
| <ul style="list-style-type: none"> <li>• Piston <math>\varnothing</math> 8 ... 63 mm</li> <li>• Cylinder barrel made of stainless steel</li> <li>• Bearing and end caps made of wrought aluminium alloy</li> </ul> | <ul style="list-style-type: none"> <li>• Piston <math>\varnothing</math> 8 ... 63 mm</li> <li>• Cylinder barrel made of stainless steel</li> <li>• Bearing cap with threaded flange</li> <li>• Short end cap with axial supply port</li> </ul> | <ul style="list-style-type: none"> <li>• Piston <math>\varnothing</math> 8 ... 63 mm</li> <li>• Cylinder barrel made of stainless steel</li> <li>• Bearing cap with threaded flange</li> <li>• Short end cap with lateral supply port</li> </ul> | <ul style="list-style-type: none"> <li>• Piston <math>\varnothing</math> 8 ... 63 mm</li> <li>• Cylinder barrel made of stainless steel</li> <li>• Direct mounting on bearing cap</li> <li>• Short end cap with lateral supply port</li> </ul> |



DSNU-...-KP

- Piston  $\varnothing$  8 ... 63 mm
- Cylinder barrel made of stainless steel
- With clamping unit



DSNU-...-Q












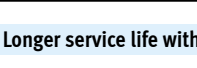
- Piston  $\varnothing$  12 ... 63 mm
- Cylinder barrel made of stainless steel
- With square piston rod



### Cushioning types

|                          | Cushioning P   | Cushioning PPS  | Cushioning PPV  |
|--------------------------|--|---|---|
| <b>Mode of operation</b> | <ul style="list-style-type: none"> <li>• The drive has elastic polymer flexible end-position cushioning</li> </ul>   | <ul style="list-style-type: none"> <li>• The drive has self-adjusting end-position cushioning</li> </ul>                                    | <ul style="list-style-type: none"> <li>• The drive has adjustable end-position cushioning</li> </ul>                            |
| <b>Application</b>       | <ul style="list-style-type: none"> <li>• Small loads</li> <li>• Low speeds</li> <li>• Low impact energies</li> </ul> | <ul style="list-style-type: none"> <li>• Small to medium loads</li> <li>• Low to medium speeds</li> <li>• Medium impact energies</li> </ul> | <ul style="list-style-type: none"> <li>• Medium to high loads</li> <li>• High speeds</li> <li>• High impact energies</li> </ul> |
| <b>Advantages</b>        | <ul style="list-style-type: none"> <li>• No adjustment required</li> <li>• Saves time</li> </ul>                     | <ul style="list-style-type: none"> <li>• No adjustment required</li> <li>• Saves time</li> <li>• Powerful</li> </ul>                        | <ul style="list-style-type: none"> <li>• Very powerful</li> </ul>   |

## Key features

| Other variants<br>Symbol  | Key features                                      | Description  |
|---|---|--|
|    | S2 Through piston rod                             | For working at both ends with the same force in the forward and return stroke, for attaching external stops  |
|    | S6 Heat-resistant seals                           | Temperature resistance up to max. 120°C  |
|    | S10 Constant motion at low piston speeds          | Suitable for very slow and constant (slow speed) and stick-slip-free movements. With very low break-away pressure compared with standard (low friction).   |
|    | S11 Low friction                                  | Especially suitable for slow movements with considerably reduced system friction. With very low break-away pressure compared with standard.  |
|    | K2 Extended male piston rod thread                | –  |
|    | K3 Female piston rod thread                       | –  |
|    | K5 Custom piston rod thread                       | Metric standard thread to ISO  |
|   | K6 Shortened male piston rod thread               | –  |
|  | K8 Extended piston rod                            | –  |
|  | R3 High corrosion protection                      | All external cylinder surfaces comply with corrosion resistance class CRC 3 to Festo standard 940070. The piston rod is made from corrosion- and acid-resistant steel                                |
|  | R8 Dust protection (wiper seal)<br>(32 ... 63 mm) | The cylinder has a hard-chrome-plated piston rod and a hard wiper seal, which protects against dry, dusty media  |
|  | A6 Metal scraper<br>(32 ... 63 mm)                | The cylinder has a hard-chrome-plated piston rod and a metal scraper that scrapes off hard particles (e.g. welding spatter) that stick to the piston rod.<br>For use in welding systems, for example |

## Longer service life with bellows kit DADB



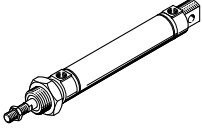
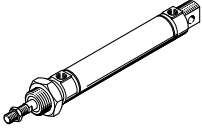
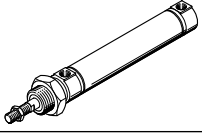
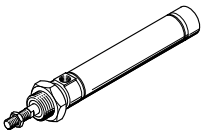
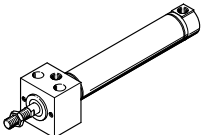
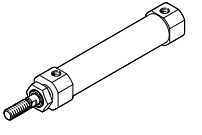
The bellows protects the piston rod, the seal and the bearing from the effects of a wide range of media, which has a positive impact on the service life of these components.

The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air for the kit must be ducted via a pressure compensation hole in the connection part [1].

The kit protects the piston rod, seal and bearing against a wide variety of media, for example:

- Dust
- Chippings
- Oil
- Grease
- Fuel

Product range overview

| Function  | Design   | Piston $\varnothing$<br>[mm] | Stroke<br>[mm]      | Variable stroke <sup>1)</sup><br>[mm] | Piston rod    |                |                |                 |                       | Female thread<br>K3   |
|---|--|------------------------------|---------------------|---------------------------------------|---------------|----------------|----------------|-----------------|-----------------------|-----------------------|
|   |  |                              |                     |                                       | Through<br>S2 | Extended<br>K8 | Male thread    |                 |                       |                       |
|   |  |                              |                     |                                       |               |                | Extended<br>K2 | Shortened<br>K6 | Custom thread<br>K5   |                       |
| Double-acting   | <b>DSNU-... – Cylinder barrel made of stainless steel</b>                          |                              |                     |                                       |               |                |                |                 |                       |                       |
|   |   | 8, 10                        | 10, 15, 20, 25, 30, | 1 ... 100                             |               |                |                |                 |                       |                       |
|   |  | 12, 16                       | 35, 40, 50, 60, 70, | 1 ... 200                             |               |                |                |                 |                       |                       |
|   |  | 20                           | 80, 100, 125, 150,  | 1 ... 320                             |               |                |                |                 |                       |                       |
|   |  | 25                           | 160, 200, 250,      | 1 ... 500                             | ■             | ■              | ■              | ■               | ■                     |                       |
|   |  | 32, 40, 50, 63               | 300, 320, 400, 500  |                                       |               |                |                |                 |                       |                       |
|   |  | 25, 40, 50, 80,              | 1 ... 500           |                                       |               |                |                |                 | From $\varnothing$ 25 | From $\varnothing$ 20 |
|   |  | 100, 125, 160,               |                     |                                       |               |                |                |                 |                       |                       |
|   |  | 200, 250, 320                |                     |                                       |               |                |                |                 |                       |                       |
|   | <b>DSNU-Q-... – Protected against rotation</b>                                     |                              |                     |                                       |               |                |                |                 |                       |                       |
|   |   | 12, 16                       | –                   | 5 ... 160                             |               |                |                |                 |                       |                       |
|   |  | 20                           | –                   | 5 ... 200                             |               |                |                |                 |                       |                       |
|   |  | 25                           | –                   | 5 ... 250                             | ■             | ■              | ■              | ■               | ■                     |                       |
|   |  | 32                           | –                   | 5 ... 300                             |               |                |                |                 |                       |                       |
|   |  | 40, 50                       | –                   | 5 ... 400                             |               |                |                |                 |                       |                       |
|   |  | 63                           | –                   | 5 ... 500                             |               |                |                |                 |                       | From $\varnothing$ 25 |
|   | <b>DSNU-MQ-... – Lateral supply port, short end cap</b>                            |                              |                     |                                       |               |                |                |                 |                       |                       |
|   |  | 8, 10                        | –                   | 1 ... 100                             |               |                |                |                 |                       |                       |
|   |  | 12, 16                       | –                   | 1 ... 200                             | –             | ■              | ■              | ■               | ■                     | ■                     |
|   |  | 20                           | –                   | 1 ... 320                             |               |                |                |                 |                       |                       |
|   |  | 25                           | –                   | 1 ... 500                             |               |                |                |                 |                       |                       |
| 32, 40, 50, 63  |  | –                            | 1 ... 500           |                                       |               |                |                |                 |                       |                       |
| <b>DSNU-MA-... – Axial supply port, short end cap</b>                               |  |                              |                     |                                       |               |                |                |                 |                       |                       |
|  | 8, 10  | –                            | 1 ... 100           |                                       |               |                |                |                 |                       |                       |
|   | 12, 16   | –                            | 1 ... 200           |                                       |               |                |                |                 |                       |                       |
|   | 20   | –                            | 1 ... 320           | –                                     | ■             | ■              | ■              | ■               | ■                     |                       |
|   | 25   | –                            | 1 ... 500           |                                       |               |                |                |                 |                       |                       |
|   | 32, 40, 50, 63   | –                            | 1 ... 500           |                                       |               |                |                |                 |                       |                       |
| <b>DSNU-MH-... – Direct mounting</b>  |  |                              |                     |                                       |               |                |                |                 |                       |                       |
|  | 8, 10  | –                            | 1 ... 100           |                                       |               |                |                |                 |                       |                       |
|   | 12, 16   | –                            | 1 ... 200           |                                       |               |                |                |                 |                       |                       |
|   | 20   | –                            | 1 ... 320           | ■                                     | ■             | ■              | ■              | ■               | ■                     |                       |
|   | 25   | –                            | 1 ... 500           |                                       |               |                |                |                 |                       |                       |
|   | 32, 40, 50, 63   | –                            | 1 ... 500           |                                       |               |                |                |                 |                       |                       |
| <b>DSNU-S-... – Space-saving</b>  |  |                              |                     |                                       |               |                |                |                 |                       |                       |
|  | 8  | 10, 15, 20, 25, 30,          | 1 ... 100           |                                       |               |                |                |                 |                       |                       |
|   | 12   | 40, 50, 60, 80, 100          | 1 ... 150           |                                       |               |                |                |                 |                       |                       |
|   | 16   | 10, 15, 20, 25, 30,          | 1 ... 200           | –                                     | –             | –              | –              | –               | –                     |                       |
|   | 20   | 40, 50, 60,                  |                     |                                       |               |                |                |                 |                       |                       |
|   | 25   | 80, 100, 125, 150, 200       |                     |                                       |               |                |                |                 |                       |                       |

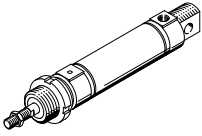
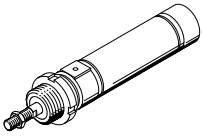
1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing

## Product range overview

| Piston $\varnothing$                                      | Cushioning  |                            |                            | Position sensing | Clamping unit | Heat-resistant seal        | Slow speed (constant motion) | Low friction               | Corrosion protection       | Dust protection (wiper seal) | Metal scraper              | → Page/ Internet |
|---|---|----------------------------|----------------------------|------------------|---------------|----------------------------|------------------------------|----------------------------|----------------------------|------------------------------|----------------------------|------------------|
|   | Fixed   | Adjustable                 | Self-adjusting             |                  |               |                            |                              |                            |                            |                              |                            |                  |
|   | P   | PPV <sup>2)</sup>          | PPS                        | A                | KP            | S6                         | S10                          | S11                        | R3                         | R8                           | A6                         |                  |
| <b>DSNU-... – Cylinder barrel made of stainless steel</b> |   |                            |                            |                  |               |                            |                              |                            |                            |                              |                            |                  |
| 8 ... 63  | ■   | ■<br>From $\varnothing$ 16 | ■<br>From $\varnothing$ 16 | ■                | ■             | ■                          | ■<br>From $\varnothing$ 12   | ■<br>From $\varnothing$ 12 | ■<br>From $\varnothing$ 12 | ■<br>From $\varnothing$ 32   | ■<br>From $\varnothing$ 32 | 11               |
| <b>DSNU-Q-... – Protected against rotation</b>            |   |                            |                            |                  |               |                            |                              |                            |                            |                              |                            |                  |
| 12 ... 63   | ■<br>$\varnothing$ 12<br>and<br>From $\varnothing$ 32 | ■<br>From $\varnothing$ 16 | –                          | ■                | ■             | ■<br>From $\varnothing$ 32 | –                            | –                          | ■<br>From $\varnothing$ 16 | –                            | –                          | 46               |
| <b>DSNU-MQ-... – Lateral supply port</b>                  |   |                            |                            |                  |               |                            |                              |                            |                            |                              |                            |                  |
| 8 ... 63  | ■   | ■<br>From $\varnothing$ 16 | ■<br>From $\varnothing$ 16 | ■                | ■             | ■                          | –                            | –                          | ■                          | ■<br>From $\varnothing$ 32   | ■<br>From $\varnothing$ 32 | 11               |
| <b>DSNU-MA-... – Axial supply port</b>                    |   |                            |                            |                  |               |                            |                              |                            |                            |                              |                            |                  |
| 8 ... 63  | ■<br>From $\varnothing$ 32                            | –                          | –                          | ■                | ■             | ■                          | –                            | –                          | ■                          | –                            | ■                          | 11               |
| <b>DSNU-MH-... – Direct mounting</b>                      |   |                            |                            |                  |               |                            |                              |                            |                            |                              |                            |                  |
| 8 ... 63  | ■   | ■<br>From $\varnothing$ 32 | –                          | ■                | –             | ■                          | –                            | –                          | ■                          | –                            | –                          | 11               |
| <b>DSNU-S-... – Space-saving</b>                          |   |                            |                            |                  |               |                            |                              |                            |                            |                              |                            |                  |
| 8 ... 25  | ■   | –                          | ■<br>From $\varnothing$ 16 | ■                | –             | –                          | –                            | –                          | –                          | –                            | –                          | dsnu-s           |

2) In the modular product system from  $\varnothing$  12 mm

Product range overview

| Function      | Design  | Piston $\varnothing$ | Stroke     | Variable stroke <sup>1)</sup> | Cushioning<br>Fixed | Position<br>sensing |
|---------------|---|----------------------|------------|-------------------------------|---------------------|---------------------|
|               |   | [mm]                 | [mm]       | [mm]                          | P                   | A                   |
| Single-acting | <b>ESNU-... – With position sensing</b>   |                      |            |                               |                     |                     |
|               |  | 8 ... 63             | 10, 25, 50 | 1 ... 50                      | ■                   | ■                   |
| Single-acting | <b>ESNU-MA-... – Axial supply port</b>  |                      |            |                               |                     |                     |
|               |  | 8 ... 63             | –          | 1 ... 50                      | ■                   | ■                   |

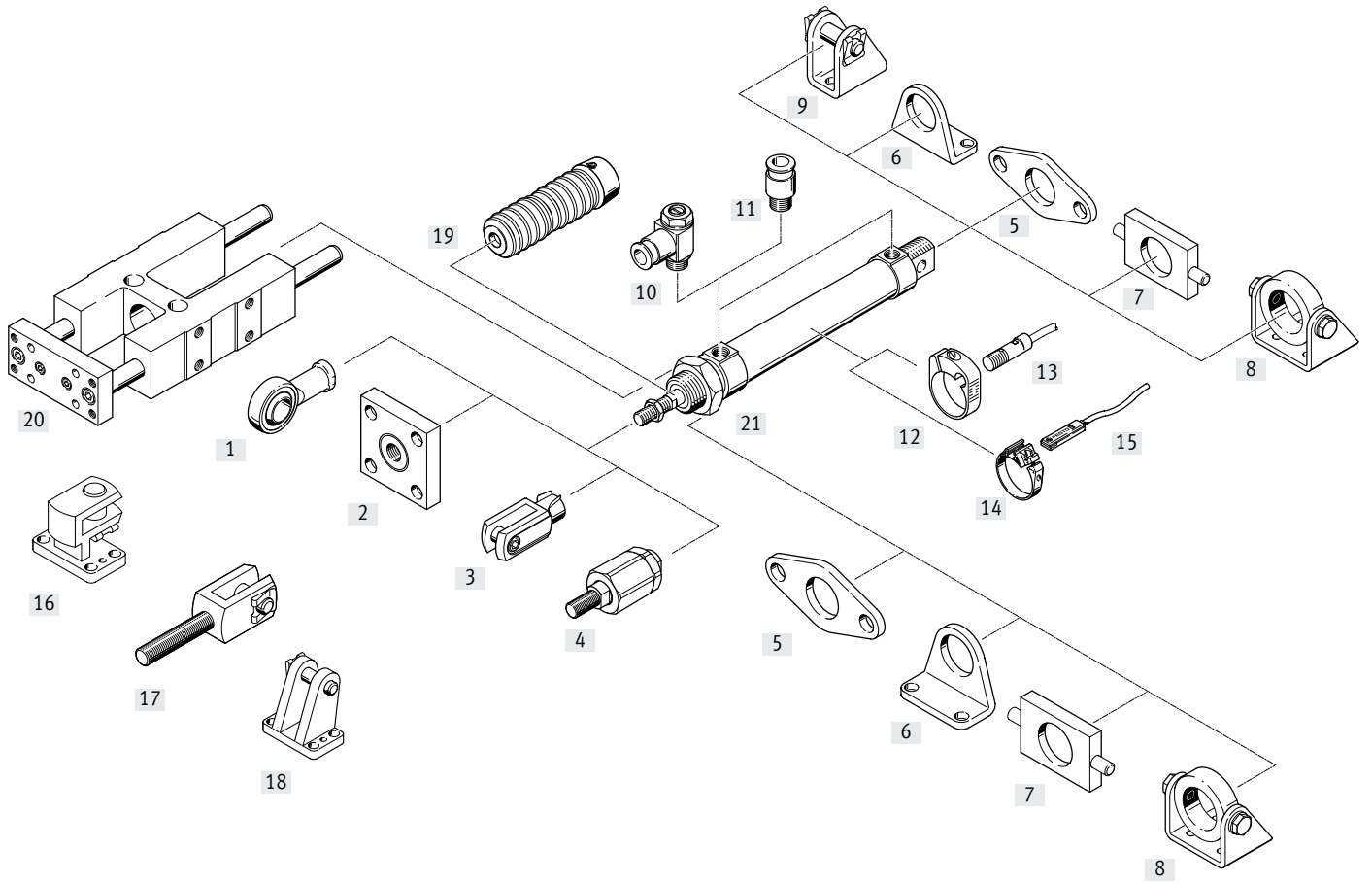
1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing

Product range overview

| Piston $\varnothing$                    | Piston rod     |                |                 |                     |                     | → Page/<br>Internet |
|---|----------------|----------------|-----------------|---------------------|---------------------|---------------------|
|   | Extended<br>K8 | Male thread    |                 |                     | Female thread<br>K3 |                     |
|   |                | Extended<br>K2 | Shortened<br>K6 | Custom thread<br>K5 |                     |                     |
| <b>ESNU-... – With position sensing</b> |                |                |                 |                     |                     |                     |
| 8 ... 63                                | ■              | ■              | ■               | ■                   | ■                   | esnu                |
| <b>ESNU-MA-... – Axial supply port</b>  |                |                |                 |                     |                     |                     |
| 8 ... 63                                | ■              | ■              | ■               | ■                   | ■                   | esnu                |

Peripherals overview


DSNU-...





## Peripherals overview

| Mounting attachments and accessories |   | Piston ø  | DSNU |    |    |    | DSNU-Q           | → Page/<br>Internet |
|--------------------------------------|---|-----------|------|----|----|----|------------------|---------------------|
|                                      |   |           | MA   | MQ | MH | KP |                  |                     |
| [1]                                  | Rod eye<br>SGS/CRSGS                    | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | 60                  |
| [2]                                  | Coupling piece<br>KSG/KSZ               | 12 ... 63 | ■    | ■  | ■  | ■  | ■                | 60                  |
| [3]                                  | Rod clevis<br>SG/CRSG                   | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | 60                  |
| [4]                                  | Self-aligning rod coupler<br>FK/CRFK    | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | 60                  |
| [5]                                  | Flange mounting<br>FBN/CRFBN/CRFV       | 8 ... 63  | ■    | ■  | ■  | –  | ■                | 56                  |
| [6]                                  | Foot mounting<br>HBN/CRHBN/CRH          | 8 ... 63  | ■    | ■  | ■  | –  | ■                | 54                  |
| [7]                                  | Swivel mounting <sup>1)</sup><br>WBN    | 8 ... 63  | ■    | ■  | ■  | –  | ■                | 58                  |
| [8]                                  | Swivel mounting <sup>1)</sup><br>SBN    | 20 ... 63 | ■    | ■  | ■  | –  | ■<br>ø 20 ... 50 | 58                  |
| [9]                                  | Clevis foot<br>LBN/CRLBN                | 8 ... 63  | ■    | –  | –  | –  | ■                | 59                  |
| [10]                                 | One-way flow control valve<br>GRLA/GRLZ | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | 70                  |
| [11]                                 | Push-in fitting<br>QS                   | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | qs                  |
| [12]                                 | Mounting kit<br>SMBR/CRSMBR             | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | 68                  |
| [13]                                 | Proximity switch<br>SMEO/SMTO/CRSMEO-4  | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | 68                  |
| [14]                                 | Mounting kit<br>SMBR-8                  | 12 ... 63 | ■    | ■  | ■  | ■  | ■                | 69                  |
| [15]                                 | Proximity switch<br>SME/SMT-8           | 8 ... 63  | ■    | ■  | ■  | ■  | ■                | 69                  |
| [16]                                 | Right-angle clevis foot<br>LQG          | 32 ... 63 | ■    | ■  | ■  | ■  | ■                | 59                  |
| [17]                                 | Rod clevis<br>SGA                       | 32 ... 63 | ■    | ■  | ■  | ■  | ■                | 60                  |
| [18]                                 | Clevis foot<br>LBG                      | 32 ... 63 | ■    | ■  | ■  | ■  | ■                | 59                  |
| [19]                                 | Bellows kit <sup>2)</sup><br>DADB       | 12 ... 63 | ■    | ■  | ■  | –  | –                | 62                  |
| [20]                                 | Guide unit<br>FEN                       | 8 ... 25  | ■    | ■  | ■  | –  | –                | 61                  |
| [21]                                 | Hex nut<br>MSK                          | 16 ... 25 | ■    | ■  | ■  | ■  | ■                | 60                  |

 **Note**

- 1) Cannot be used on the bearing cap in combination with bellows kit DADB.
- 2) The bellows kit protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear. It can only be used in combination with an extended piston rod (K8)

## Type codes

### DSNU-...

|             |  |  |
|-------------|--|--|
| <b>001</b>  | <b>Series</b>                                    |  |
| <b>DSNU</b> | Round cylinder, double-acting, based on ISO 6432 |  |

|            |                        |  |
|------------|------------------------|--|
| <b>002</b> | <b>Piston diameter</b> |  |
| <b>8</b>   | 8                      |  |
| <b>10</b>  | 10                     |  |
| <b>12</b>  | 12                     |  |
| <b>16</b>  | 16                     |  |
| <b>20</b>  | 20                     |  |
| <b>25</b>  | 25                     |  |
| <b>32</b>  | 32                     |  |
| <b>40</b>  | 40                     |  |
| <b>50</b>  | 50                     |  |
| <b>63</b>  | 63                     |  |

|            |               |  |
|------------|---------------|--|
| <b>003</b> | <b>Stroke</b> |  |
| <b>...</b> | 1 ... 500     |  |

|            |   |  |
|------------|---|--|
| <b>004</b> | <b>Cushioning</b>                                 |  |
| <b>P</b>   | Elastic cushioning rings/plates on both sides     |  |
| <b>PPV</b> | Pneumatic cushioning, adjustable at both ends     |  |
| <b>PPS</b> | Pneumatic cushioning, self-adjusting at both ends |  |

|            |                         |  |
|------------|-------------------------|--|
| <b>005</b> | <b>Position sensing</b> |  |
|            | None                    |  |
| <b>A</b>   | For proximity sensor    |  |

|            |                                 |  |
|------------|---------------------------------|--|
| <b>006</b> | <b>Cylinder end cap</b>         |  |
|            | Standard                        |  |
| <b>MA</b>  | Axial air connection, end cap   |  |
| <b>MH</b>  | Direct mounting, bearing cap    |  |
| <b>MQ</b>  | Transverse supply port, end cap |  |

|            |                                    |  |
|------------|------------------------------------|--|
| <b>007</b> | <b>Protection against rotation</b> |  |
| <b>Q</b>   | Square piston rod                  |  |
|            | None                               |  |

|            |                        |  |
|------------|------------------------|--|
| <b>008</b> | <b>Piston rod type</b> |  |
|            | At one end             |  |
| <b>S2</b>  | Through piston rod     |  |

|              |                                    |  |
|--------------|------------------------------------|--|
| <b>009</b>   | <b>Piston rod thread extension</b> |  |
|              | None                               |  |
| <b>...K2</b> | 1 ... 70 mm                        |  |

|            |  |  |
|------------|--|--|
| <b>010</b> | <b>K6 - Shortened male piston rod thread</b> |  |
|            | None   |  |
| <b>K6</b>  | 1 ... 10 mm                                  |  |

|            |                               |  |
|------------|-------------------------------|--|
| <b>011</b> | <b>Piston rod thread type</b> |  |
|            | Male thread                   |  |
| <b>K3</b>  | Female thread                 |  |

|                |                      |  |
|----------------|----------------------|--|
| <b>012</b>     | <b>Custom thread</b> |  |
| <b>"M10"K5</b> | M10                  |  |
| <b>"M12"K5</b> | M12                  |  |
| <b>"M16"K5</b> | M16                  |  |

|              |                             |  |
|--------------|-----------------------------|--|
| <b>013</b>   | <b>Piston rod extension</b> |  |
|              | None                        |  |
| <b>...K8</b> | 1 ... 500 mm                |  |

|            |                      |  |
|------------|----------------------|--|
| <b>014</b> | <b>Clamping unit</b> |  |
|            | None                 |  |
| <b>KP</b>  | attached             |  |

|            |                                  |  |
|------------|----------------------------------|--|
| <b>015</b> | <b>Temperature range</b>         |  |
|            | Standard                         |  |
| <b>S6</b>  | Heat-resistant seals max. 120 °C |  |

|            |                        |  |
|------------|------------------------|--|
| <b>016</b> | <b>Constant motion</b> |  |
|            | Standard               |  |
| <b>S10</b> | Uniform, slow movement |  |

|            |                                |  |
|------------|--------------------------------|--|
| <b>017</b> | <b>Running characteristics</b> |  |
|            | Standard                       |  |
| <b>S11</b> | Low friction                   |  |

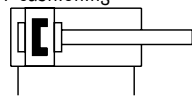
|            |                             |  |
|------------|-----------------------------|--|
| <b>018</b> | <b>Corrosion protection</b> |  |
|            | Standard                    |  |
| <b>R3</b>  | High corrosion protection   |  |

|            |                        |  |
|------------|------------------------|--|
| <b>019</b> | <b>Scraper variant</b> |  |
|            | Standard               |  |
| <b>R8</b>  | Dust protection        |  |
| <b>A6</b>  | Metal scraper          |  |

|            |                         |  |
|------------|-------------------------|--|
| <b>020</b> | <b>EU certification</b> |  |
|            | None                    |  |
| <b>EX4</b> | II 2GD                  |  |

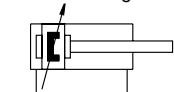
## Data sheet


## P cushioning



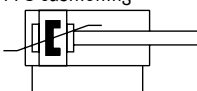
-  Diameter  
8 ... 25 mm  
ISO 6432


## PPV cushioning



-  Diameter  
32 ... 63 mm

## PPS cushioning



-  Stroke length  
1 ... 500 mm,  
longer strokes on request



| General technical data |      | 8  | 10 | 12                                      | 16 | 20        | 25        | 32       | 40       | 50      | 63      |  |
|------------------------|------|--|----|---|----|-----------|-----------|----------|----------|---------|---------|--|
| Piston $\varnothing$   |      | 8  | 10 | 12                                      | 16 | 20        | 25        | 32       | 40       | 50      | 63      |  |
| Conforms to standard   |      | ISO 6432                                     |    |   |    |           |           | -        |          |         |         |  |
| Pneumatic connection   |      | M5   | M5 | M5                                      | M5 | G1/8      | G1/8      | G1/8     | G1/4     | G1/4    | G3/8    |  |
| Piston rod thread      |      | M4   | M4 | M6                                      | M6 | M8        | M10x1.25  | M10x1.25 | M12x1.25 | M16x1.5 | M16x1.5 |  |
| Stroke <sup>1)</sup>   | [mm] | 1 ... 100                                    |    | 1 ... 200                               |    | 1 ... 320 | 1 ... 500 |          |          |         |         |  |
| Design                 |      | Piston/piston rod/cylinder barrel            |    |   |    |           |           |          |          |         |         |  |
| Cushioning             |      |  |    |   |    |           |           |          |          |         |         |  |
| DSNU-...-P             |      | Elastic cushioning rings/plates at both ends |    |   |    |           |           |          |          |         |         |  |
| DSNU-...-PPV           |      | -  |    | Cushioning, adjustable at both ends     |    |           |           |          |          |         |         |  |
| DSNU-...-PPS           |      | -  |    | Cushioning, self-adjusting at both ends |    |           |           |          |          |         |         |  |
| Cushioning length      |      |  |    |   |    |           |           |          |          |         |         |  |
| DSNU-...-PPV           | [mm] | -  |    | 9                                       | 12 | 15        | 17        | 14       | 18       | 20      | 21      |  |
| DSNU-...-PPS           | [mm] | -  |    | 12                                      | 15 | 17        | 14        | 18       | 20       | 21      |         |  |
| Position sensing       |      | Via proximity switch                         |    |   |    |           |           |          |          |         |         |  |
| Type of mounting       |      | Direct mounting (variant MH only)            |    |   |    |           |           |          |          |         |         |  |
|                        |      | With accessories                             |    |   |    |           |           |          |          |         |         |  |
| Mounting position      |      | Any  |    |   |    |           |           |          |          |         |         |  |

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.  
Longer strokes on request

Data sheet

| Operating and environmental conditions       |  |    |             |            |    |    |            |            |    |    |  |
|--|--|----|-------------|------------|----|----|------------|------------|----|----|--|
| Piston ø                                     | 8  | 10 | 12          | 16         | 20 | 25 | 32         | 40         | 50 | 63 |  |
| 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) |    |             |            |    |    |            |            |    |    |  |
| Operating pressure                           |  |    |             |            |    |    |            |            |    |    |  |
| DSNU-... [bar]                               | 1.5 ... 10 <sup>1)</sup>   |    |             | 1 ... 10   |    |    |            |            |    |    |  |
| DSNU-...-S10 [bar]                           | -  |    | 0.5 ... 10  | 0.3 ... 10 |    |    | 0.2 ... 10 |            |    |    |  |
| DSNU-...-S11 [bar]                           | -  |    | 0.45 ... 10 | 0.3 ... 10 |    |    | 0.2 ... 10 |            |    |    |  |
| DSNU-...-A6 [bar]                            | -  |    |             |            |    |    |            | 2 ... 10   |    |    |  |
| Ambient temperature <sup>2)</sup>            |  |    |             |            |    |    |            |            |    |    |  |
| DSNU-... [°C]                                | -20 ... +80  |    |             |            |    |    |            |            |    |    |  |
| DSNU-...-S6 [°C]                             | 0 ... +120   |    |             |            |    |    |            |            |    |    |  |
| DSNU-...-S10 [°C]                            | +5 ... +80   |    |             |            |    |    |            |            |    |    |  |
| DSNU-...-S11 [°C]                            | +5 ... +80   |    |             |            |    |    |            |            |    |    |  |
| DSNU-...-R3 [°C]                             | -20 ... +80  |    |             |            |    |    |            |            |    |    |  |
| DSNU-...-S6-A6 [°C]                          | -  |    |             |            |    |    |            | 0 ... +120 |    |    |  |
| Corrosion resistance class CRC <sup>3)</sup> |  |    |             |            |    |    |            |            |    |    |  |
| DSNU-...                                     | 2  |    |             |            |    |    |            |            |    |    |  |
| DSNU-...-R3                                  | 3  |    |             |            |    |    |            |            |    |    |  |

1) For DSNU-12-... PPV (pneumatic cushioning adjustable at both ends): 2 ... 10 bar

2) Note operating range of proximity switches

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 which are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

| ATEX <sup>1)</sup>                         |   |
|--|---|
| ATEX category gas                          | II 2G                                       |
| Type of ignition protection for gas        | Ex h IIC T4 Gb                              |
| ATEX category for dust                     | II 2D                                       |
| Type of ignition protection for dust       | Ex h IIIC T120°C Db                         |
| Explosion-proof ambient temperature        | -20°C ≤ Ta ≤ +60°C                          |
| CE marking (see declaration of conformity) | To EU Explosion Protection Directive (ATEX) |

1) Note the ATEX certification of the accessories.

| Weight [g]                         |      |      |      |      |       |     |       |     |      |      |
|------------------------------------|------|------|------|------|-------|-----|-------|-----|------|------|
| Piston ø                           | 8    | 10   | 12   | 16   | 20    | 25  | 32    | 40  | 50   | 63   |
| Product weight with 0 mm stroke    | 34.6 | 37.3 | 75   | 89.9 | 186.8 | 238 | 370.5 | 661 | 1087 | 1445 |
| Additional weight per 10 mm stroke | 2.4  | 2.7  | 4    | 4.6  | 7.2   | 11  | 15.5  | 24  | 40   | 44   |
| Moving mass with 0 mm stroke       | 7.5  | 8.5  | 18.5 | 23   | 44    | 71  | 121   | 230 | 413  | 459  |
| Moving mass per 10 mm stroke       | 1    | 1    | 2    | 2    | 4     | 6   | 9     | 16  | 25   | 25   |

## Data sheet

| Speed [mm/s]   |     | 16         | 20  | 25               | 32        | 40 | 50 | 63        |  |
|--|-----|------------|-----|------------------|-----------|----|----|-----------|--|
| Piston $\varnothing$   |     |            |     |                  |           |    |    |           |  |
| Speed with stick-slip-free operation, horizontal, without load, at 6 bar | S10 | 10 ... 100 |     |                  | 8 ... 100 |    |    | 5 ... 100 |  |
| Minimum speed, advancing   | S11 | 2.7        | 5.3 | <1 <sup>1)</sup> |           |    |    |           |  |
| Minimum speed, retracting  | S11 | 3.2        | 4.7 | <1 <sup>1)</sup> |           |    |    |           |  |

1) Measurements of less than 1 mm/s were not conducted

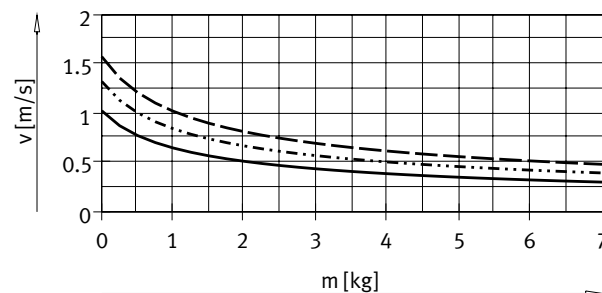
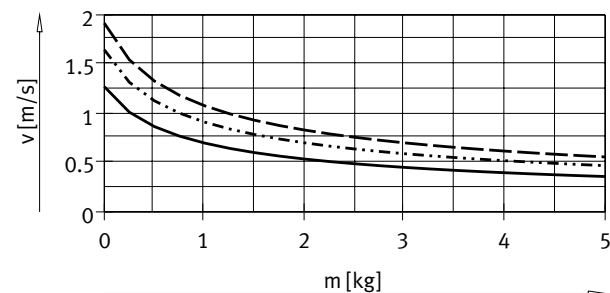
| Forces [N] and impact energy [J]                                  |  | 8    | 10   | 12   | 16   | 20   | 25   | 32   | 40   | 50   | 63   |
|---|--|------|------|------|------|------|------|------|------|------|------|
| Piston $\varnothing$  |  |      |      |      |      |      |      |      |      |      |      |
| Theoretical force at 6 bar, advancing                             |  | 30   | 47   | 68   | 121  | 189  | 295  | 483  | 753  | 1178 | 1870 |
| Theoretical force at 6 bar, retracting                            |  | 23   | 40   | 51   | 104  | 158  | 247  | 415  | 633  | 990  | 1682 |
| Impact energy in the end positions for P cushioning <sup>1)</sup> |  | 0.03 | 0.05 | 0.07 | 0.15 | 0.20 | 0.30 | 0.40 | 0.70 | 1.00 | 1.30 |

1) The values are reduced by approx. 50% at an ambient temperature of 80°C

### Average piston speed $v$ as a function of payload $m$ in combination with cushioning PPS

Piston  $\varnothing$  16

Piston  $\varnothing$  20

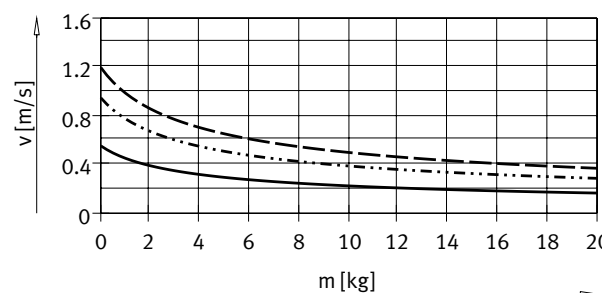
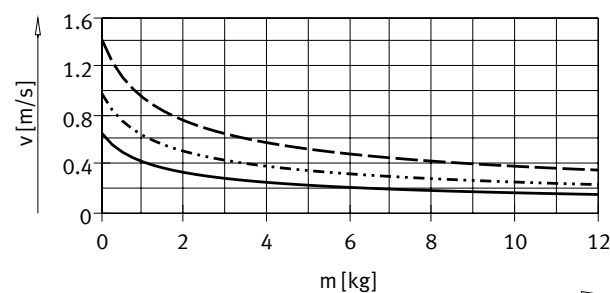


— DSNU-16-50  
 ..... DSNU-16-100  
 - - - - DSNU-16-200

— DSNU-20-50  
 ..... DSNU-20-100  
 - - - - DSNU-20-200

Piston  $\varnothing$  25

Piston  $\varnothing$  32



— DSNU-25-50  
 ..... DSNU-25-100  
 - - - - DSNU-25-200

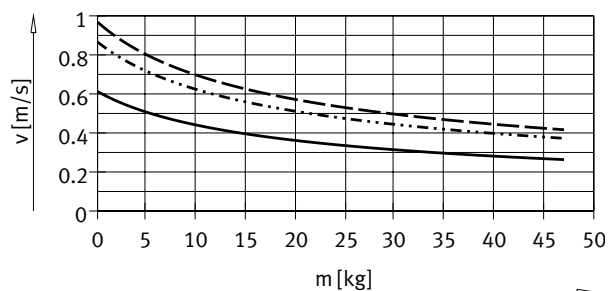
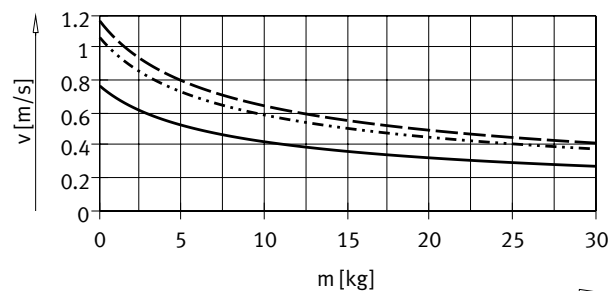
— DSNU-32-50  
 ..... DSNU-32-100  
 - - - - DSNU-32-200

Data sheet

Average piston speed  $v$  as a function of payload  $m$  in combination with cushioning PPS

Piston  $\varnothing$  40

Piston  $\varnothing$  50

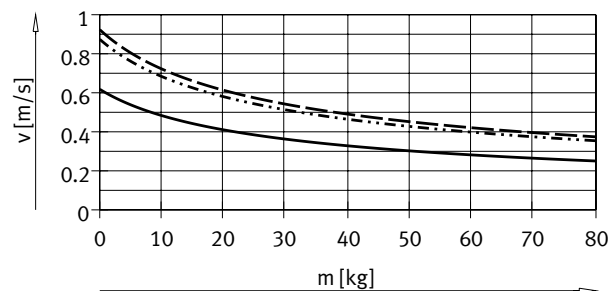


- DSNU-40-50
- DSNU-40-100
- - - DSNU-40-200

- DSNU-50-50
- DSNU-50-100
- - - DSNU-50-200

Piston  $\varnothing$  63

Note:



Engineering software for  
P cushioning  
PPV cushioning  
→ [https://www.festo.com/eap/en\\_gb/PneumaticSizing/](https://www.festo.com/eap/en_gb/PneumaticSizing/)

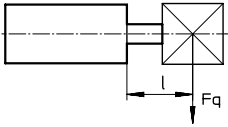
Average piston speed = Stroke/  
movement time

Additional graphs for  
PPS cushioning  
→ [www.festo.com](http://www.festo.com)

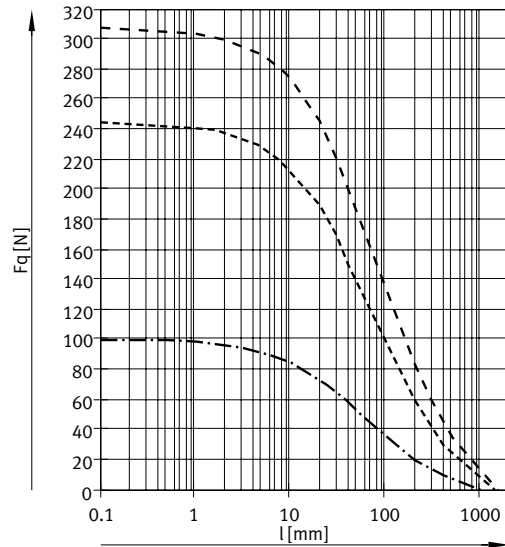
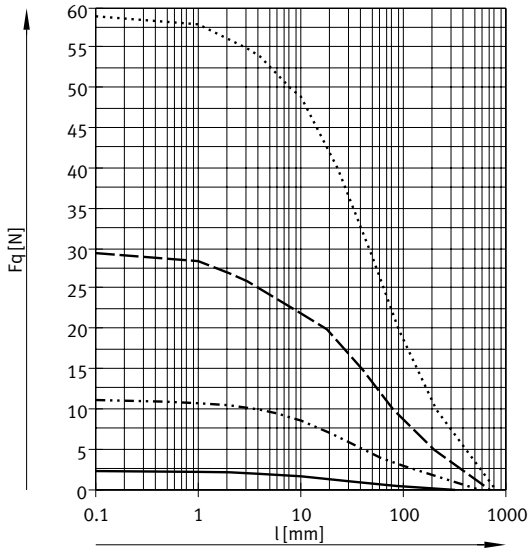
- DSNU-63-50
- DSNU-63-100
- - - DSNU-63-200

Data sheet

Max. transverse load  $F_q$  as a function of projection  $l$



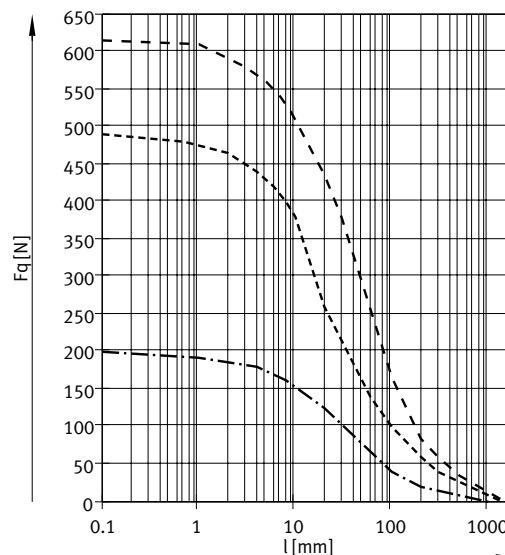
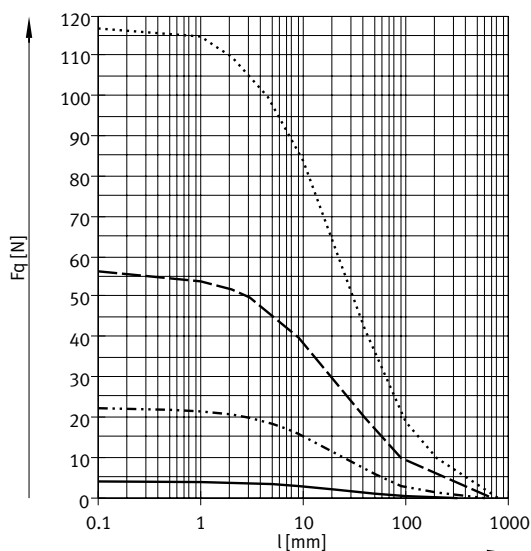
DSNU-...



- DSNU-8/10
- - - - DSNU-12/16
- — — — DSNU-20
- ..... DSNU-25

- · - · - · DSNU-32
- - - - DSNU-40
- - - - DSNU-50/63

DSNU-...-S2 – Through piston rod



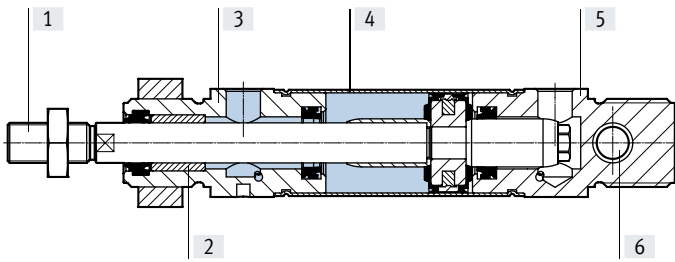
- DSNU-8/10
- - - - DSNU-12/16
- — — — DSNU-20
- ..... DSNU-25

- · - · - · DSNU-32
- - - - DSNU-40
- - - - DSNU-50/63

Data sheet

Materials

Sectional view



|                        |   |                                   |
|------------------------|---|-----------------------------------|
| Round cylinder         | 8 ... 25  | 32 ... 63                         |
| [1] Piston rod         |   |                                   |
| DSNU-...               | High-alloy steel  |                                   |
| DSNU-...-R3            | High-alloy stainless steel  |                                   |
| DSNU-...-A6            | -   | Hard-chrome-plated tempered steel |
| [2] Piston rod bearing | Sintered bronze   |                                   |
| [3] Bearing cap        | Colourless anodised wrought aluminium alloy                                 |                                   |
| [4] Cylinder barrel    | High-alloy stainless steel  |                                   |
| [5] End cap            | Colourless anodised wrought aluminium alloy                                 |                                   |
| - Seals                |   |                                   |
| DSNU-...               | TPE-U(PU), NBR  |                                   |
| DSNU-...-S6            | FPM   |                                   |
| DSNU-...-S10           | FPM   | FPM, TPE-U(PU)                    |
| DSNU-...-S11           | FPM   | FPM, TPE-U(PU)                    |
| DSNU-...-R3            | TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning) |                                   |
| Piston rod scraper     |   |                                   |
| DSNU-...-A6            | -   | CuZn                              |
| Note on materials      |   |                                   |
| DSNU-...               | RoHS-compliant  |                                   |
| DSNU-...-S10/11        | Contains paint-wetting impairment substances                                |                                   |
| [6] Swivel bearing     | Polymer   |                                   |

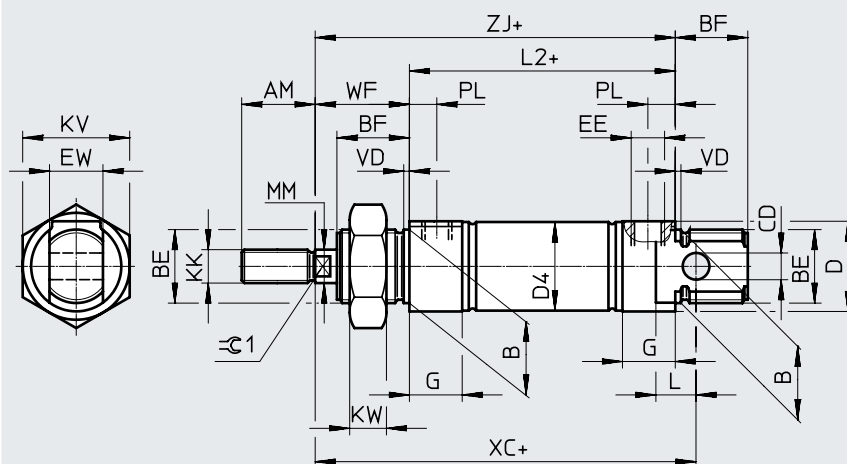


Data sheet

Dimensions

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

DSNU-8 ... 25



**Note**  
 Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.  
 + = plus stroke length

| ∅<br>[mm] | AM | B<br>∅<br>h9 | BE       | BF | CD<br>∅<br>H9 | D<br>∅ | D4<br>∅ | EE   | EW | G  | KK | KV |
|-----------|----|--------------|----------|----|---------------|--------|---------|------|----|----|----|----|
| 8         | 12 | 12           | M12x1.25 | 12 | 4             | 15     | 9.3     | M5   | 8  | 10 | M4 | 19 |
| 10        | 16 | 16           | M16x1.5  | 17 | 6             | 20     | 11.3    |      |    |    |    |    |
| 12        |    |              |          |    |               |        | 13.3    |      |    |    |    |    |
| 16        |    |              |          |    |               |        | 17.3    |      |    |    |    |    |
| 20        | 20 | 22           | M22x1.5  | 20 | 8             | 27     | 21.3    | G1/8 | 16 | 16 | M8 | 32 |
| 25        | 22 |              |          | 22 |               |        |         |      |    |    |    |    |

| ∅<br>[mm] | KW | L  | L2   | MM<br>∅ | PL  | VD | WF | XC<br>±1 | ZJ   | ≈G1 |
|-----------|----|----|------|---------|-----|----|----|----------|------|-----|
| 8         | 6  | 6  | 46   | 4       | 6   | 2  | 16 | 64       | 62   | -   |
| 10        | 8  | 9  | 50   | 6       | 8.2 |    | 22 | 75       | 72   | 5   |
| 12        |    |    | 56   |         |     |    |    |          | 78   |     |
| 16        |    |    |      |         |     |    |    |          | 68   |     |
| 20        | 11 | 12 | 69.5 | 10      |     |    | 28 | 104      | 97.5 | 9   |
| 25        |    |    |      |         |     |    |    |          |      |     |

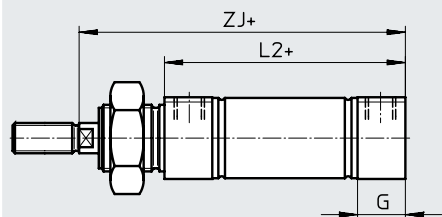
Data sheet

Dimensions

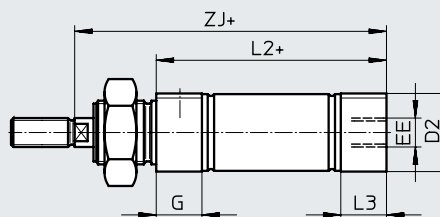
Download CAD data → [www.festo.com](http://www.festo.com)

DSNU-8 ... 25

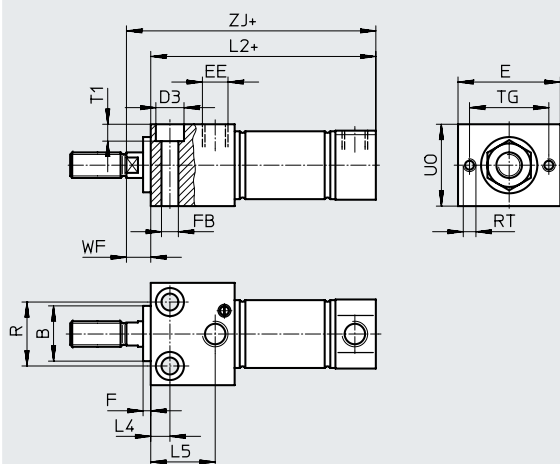
MQ – Lateral supply port, short end cap



MA – Axial supply port, short end cap



MH – With direct mounting



+ = plus stroke length

| ∅<br>[mm] | B<br>∅<br>h9 | D2<br>∅ | D3<br>∅ | E    | EE   | F   | FB<br>∅ | G  | L2       |      |      |
|-----------|--------------|---------|---------|------|------|-----|---------|----|----------|------|------|
|           |              |         |         |      |      |     |         |    | DSNU-... |      |      |
|           |              |         |         |      |      |     |         |    | -MQ      | -MA  | -MH  |
| 8         | 12           | 10.5    | 6       | 24   | M5   | 3   | 3.4     | 10 | 46       | 43.6 | 53.5 |
| 10        |              | 12.5    |         |      |      |     |         |    | 43.1     | 53.8 |      |
| 12        |              | 16      | 14.5    |      |      |     |         |    | 8        | 30   | 4.5  |
| 16        | 17.5         |         | 56      | 53.7 | 67.5 |     |         |    |          |      |      |
| 20        | 22           | 21.7    | 10      | 40   | G1/8 | 5.5 | 16      | 68 | 66.5     |      |      |
| 25        |              | 26.7    |         |      |      |     |         | 11 | 69.5     | 68.5 | 86.2 |

| ∅<br>[mm] | L3   | L4  | L5   | R    | RT | TG | T1  | UO | WF | ZJ       |      |      |
|-----------|------|-----|------|------|----|----|-----|----|----|----------|------|------|
|           |      |     |      |      |    |    |     |    |    | DSNU-... |      |      |
|           |      |     |      |      |    |    |     |    |    | -MQ      | -MA  | -MH  |
| 8         | 7.6  | 5   | 14   | 12   | M3 | 18 | 3.4 | 16 | 8  | 62       | 59.6 | 61.5 |
| 10        | 7.1  |     |      | 59.1 |    |    |     |    |    |          | 61.8 |      |
| 12        | 7.7  | 6   | 18.1 | 16   | M4 | 23 | 4.5 | 22 | 10 | 72       | 69.7 | 72   |
| 16        |      |     |      |      |    |    |     |    |    |          | 78   | 75.7 |
| 20        | 14.5 | 7.5 | 22.4 | 22   | M5 | 31 | 5.5 | 28 | 11 | 92       | 90.5 | 91.5 |
| 25        | 14   |     |      |      |    |    |     |    |    |          | 25.2 | 25   |

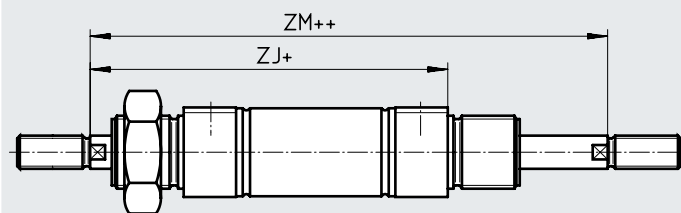
Data sheet

Dimensions

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

DSNU-8 ... 25

S2 – Through piston rod

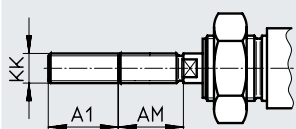


Note

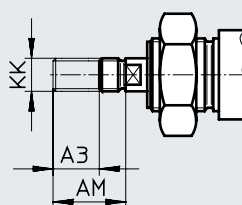
The thread types at both piston rod ends are identical. In combination with variant Q, the left piston rod end is square, the right piston rod end round.

+ = plus stroke length  
++ = plus 2x stroke length

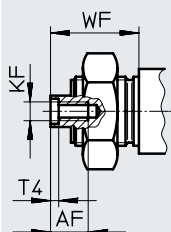
K2 – Extended male piston rod thread



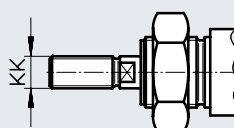
K6 – Shortened male piston rod thread



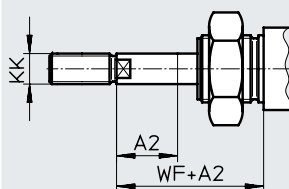
K3 – Female piston rod thread



K5 – Custom piston rod thread



K8 – Extended piston rod



Note

If variant K8 is required in combination with S2, the piston rod will only be extended at one end.

| ø<br>[mm] | A1<br>max. | A2<br>max. | A3<br>max. | AF | AM | KF | KK           |                             | T4  | WF | ZJ       |      |      | ZM    |
|-----------|------------|------------|------------|----|----|----|--------------|-----------------------------|-----|----|----------|------|------|-------|
|           |            |            |            |    |    |    | Basic thread | Custom thread <sup>1)</sup> |     |    | DSNU-... |      |      |       |
|           |            |            |            |    |    |    |              |                             |     |    | -MQ      | -MA  | -MH  |       |
| 8         | 15         | 50         | 4          | -  | 12 | -  | M4           | -                           | 16  | 62 | 59.6     | 61.5 | 78.4 |       |
| 10        |            |            |            | -  |    | -  |              | 59.1                        |     |    | 61.8     |      |      |       |
| 12        | 20         | 100        |            | -  | 16 | -  | M6           | -                           | 22  | 72 | 69.7     | 72   | 94   |       |
| 16        |            |            |            | -  |    | -  |              | 78                          |     |    | 75.7     | 77.8 |      | 100   |
| 20        | 25         | 110        | 8          | 12 | 20 | M4 | M8           | -                           | 2   | 24 | 92       | 90.5 | 91.5 | 116   |
| 25        | 35         | 150        |            |    | 22 | M6 | M10x1.25     | M10                         | 2.6 | 28 | 97.5     | 96.5 | 97.2 | 125.5 |

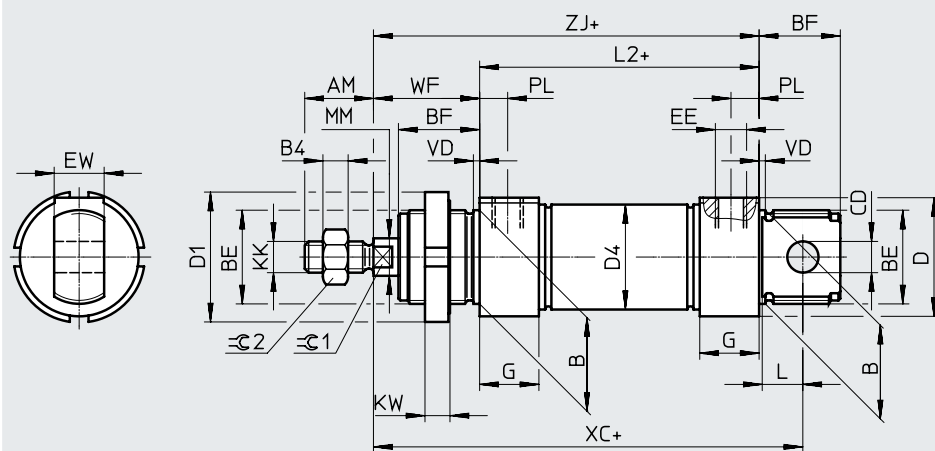
1) The custom threads are only available as male threads. The scope of delivery does not include a hex nut for the piston rod thread

Data sheet

Dimensions

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DSNU-32 ... 63



+ = plus stroke length

| ∅  | AM | B<br>∅<br>h9 | B4 | BE      | BF | CD<br>∅<br>E10 | D<br>∅ | D1<br>∅ | D4<br>∅ | EE   | EW | G  |
|----|----|--------------|----|---------|----|----------------|--------|---------|---------|------|----|----|
| 32 | 22 | 30           | 5  | M30x1.5 | 26 | 10             | 38     | 42      | 33.6    | G1/8 | 16 | 19 |
| 40 | 24 | 38           | 6  | M38x1.5 | 30 | 12             | 46     | 50      | 41.6    | G1/4 | 18 | 25 |
| 50 | 32 | 45           | 8  | M45x1.5 | 33 | 16             | 57     | 60      | 52.4    | G3/8 | 21 | 28 |
| 63 |    |              |    |         |    |                | 70     |         | 65.4    |      |    |    |

| ∅  | KK       | KW | L  | L2   | MM<br>∅ | PL | VD | WF | XC<br>±1 | ZJ    | ≅C1 | ≅C2 |
|----|----------|----|----|------|---------|----|----|----|----------|-------|-----|-----|
| 32 | M10x1.25 | 8  | 13 | 69.5 | 12      | 9  | 2  | 34 | 117.5    | 103.5 | 10  | 16  |
| 40 | M12x1.25 | 10 | 15 | 84.6 | 16      | 12 | 3  | 39 | 139.6    | 123.6 | 13  | 18  |
| 50 | M16x1.5  |    | 16 | 86.2 | 20      |    |    | 44 | 147.2    | 130.2 | 17  | 24  |
| 63 |          |    |    | 94.2 |         | 13 |    | 45 | 156.2    | 139.2 |     |     |

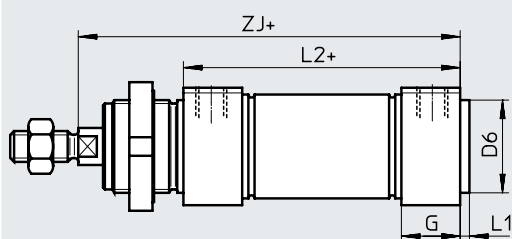
Data sheet

Dimensions

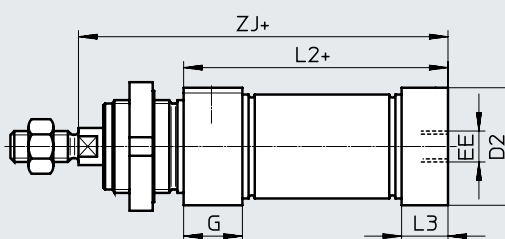
Download CAD data → [www.festo.com](http://www.festo.com)

DSNU-32 ... 63

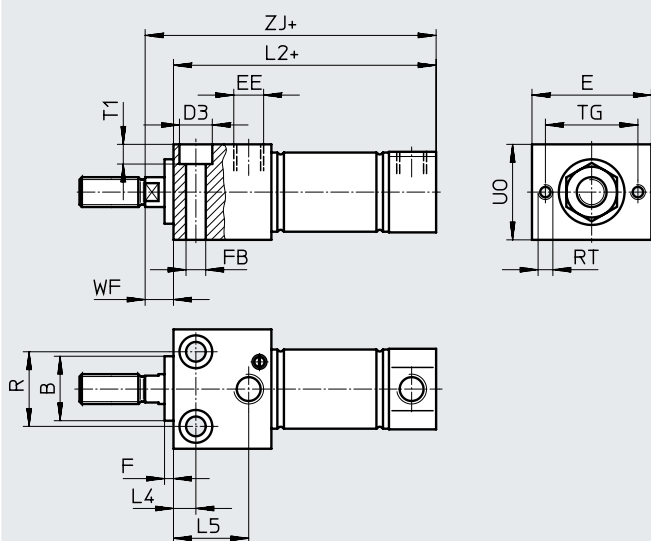
MQ – Lateral supply port, short end cap



MA – Axial supply port, short end cap



MH – With direct mounting



[1] Centring holes  
(2 centring sleeves included in the scope of delivery)  
+ = plus stroke length

| ø<br>[mm] | B<br>ø<br>h9 | B2 | E  | EE   | G  | F  | FB<br>ø | D2<br>ø | D3 | D5<br>ø | D6<br>ø | L1 | L2       |      |       |
|-----------|--------------|----|----|------|----|----|---------|---------|----|---------|---------|----|----------|------|-------|
|           |              |    |    |      |    |    |         |         |    |         |         |    | DSNU-... |      |       |
|           |              |    |    |      |    |    |         |         |    |         |         |    | -MQ      | -MA  | -MH   |
| 32        | 30           | 1  | 48 | G1/8 | 19 | 4  | 6.6     | 34      | 11 | 9       | 30      | 3  | 69.5     | 65.5 | 85.5  |
| 40        | 38           |    | 54 | G1/4 | 25 |    | 9       | 42      | 14 | 12      | 38      |    | 4        | 84.6 | 77.6  |
| 50        | 45           | 2  | 64 | G3/8 | 28 | 11 | 11      | 53      | 18 | 15      | 45      | 4  | 86.2     | 86.2 | 109.2 |
| 63        |              |    | 72 |      |    |    |         | 66      |    |         |         |    | 18       | 15   | 94.2  |

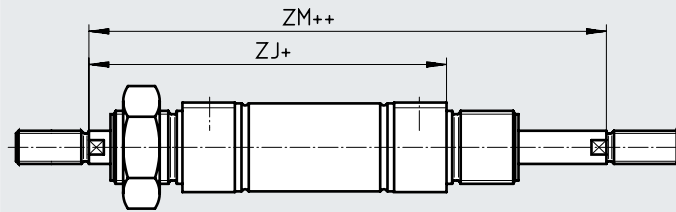
| ø<br>[mm] | L3 | L4 | L5 | R  | RT | T0 | T1  | T2  | TG    | U0    | WF    | ZJ       |       |       |
|-----------|----|----|----|----|----|----|-----|-----|-------|-------|-------|----------|-------|-------|
|           |    |    |    |    |    |    |     |     |       |       |       | DSNU-... |       |       |
|           |    |    |    |    |    |    |     |     |       |       |       | -MQ      | -MA   | -MH   |
| 32        | 15 | 12 | 25 | 30 | M5 | 19 | 6.6 | 2.1 | 38    | 40    | 12    | 103.5    | 99.5  | 97.5  |
| 40        | 18 | 15 | 32 | 38 | M6 | 24 | 9   | 2.6 | 42    | 48    |       | 15       | 123.6 | 116.5 |
| 50        | 25 |    | 35 | 42 |    | 32 | 50  | 58  | 130.2 | 130.2 | 124.2 |          |       |       |
| 63        | 28 | 36 | 44 | M8 | 36 | 11 | 3.1 | 52  | 72    | 139.2 | 139.2 | 132.2    |       |       |

Data sheet

Dimensions

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

DSNU-32 ... 63  
S2 – Through piston rod

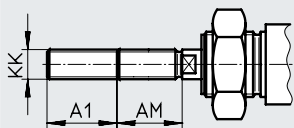


Note

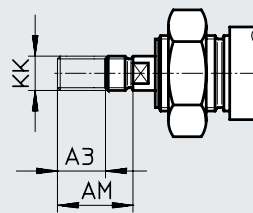
The thread types at both piston rod ends are identical. In combination with variant Q, the left piston rod end is square, the right piston rod end round.

+ = plus stroke length  
++ = plus 2x stroke length

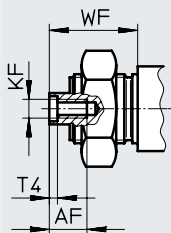
K2 – Extended male piston rod thread



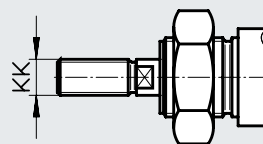
K6 – Shortened male piston rod thread



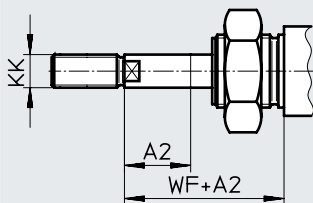
K3 – Female piston rod thread



K5 – Custom piston rod thread



K8 – Extended piston rod



Note

If variant K8 is required in combination with S2, the piston rod will only be extended at one end.

| ø<br>[mm] | A1<br>max. | A2<br>max. | A3<br>max. | AF | AM | KF  | KK           |                             | T4  | WF | ZJ       |          |       | ZM    |
|-----------|------------|------------|------------|----|----|-----|--------------|-----------------------------|-----|----|----------|----------|-------|-------|
|           |            |            |            |    |    |     | Basic thread | Custom thread <sup>1)</sup> |     |    | DSNU-... |          |       |       |
|           |            |            |            |    |    |     |              |                             |     |    | -MQ      | -MA      | -MH   |       |
| 32        | 35         | 500        | 8          | 12 | 22 | M6  | M10x1.25     | M10                         | 2.6 | 34 | 103.5    | 99.5     | 97.5  | 137.5 |
| 40        |            |            |            |    | 24 |     |              |                             |     |    | M8       | M12x1.25 | M12   | 3.3   |
| 50        | 70         |            | 10         | 16 | 32 | M10 | M16x1.5      | M16                         | 4.7 | 44 | 130.2    | 130.2    | 124.2 | 174.2 |
| 63        |            |            |            |    | 45 |     |              |                             |     |    | 139.2    | 139.2    | 132.2 | 184.2 |

1) The custom threads are only available as male threads. The scope of delivery does not include a hex nut for the piston rod thread

## Data sheet

## ★ Core product range

| Ordering data |        |  |                           | PPV – Pneumatic cushioning, adjustable at both ends |                   | PPS – Pneumatic cushioning, self-adjusting at both ends |                   |
|---------------|--------|--|---------------------------|---|-------------------|---|-------------------|
| Piston ø      | Stroke | P – Elastic cushioning rings/plates at both ends | A – With position sensing | A – With position sensing                           |                   | A – With position sensing                               |                   |
| [mm]          | [mm]   | Part no.   | Type                      | Part no.  | Type              | Part no.  | Type              |
| 12            | 10     | ★ 19189  | DSNU-12-10-P-A            | –   |                   | –   |                   |
|               | 15     | ★ 1908255  | DSNU-12-15-P-A            | –   |                   | –   |                   |
|               | 20     | ★ 1908256  | DSNU-12-20-P-A            | –   |                   | –   |                   |
|               | 25     | ★ 19190  | DSNU-12-25-P-A            | –   |                   | –   |                   |
|               | 30     | ★ 1908257  | DSNU-12-30-P-A            | –   |                   | –   |                   |
|               | 40     | ★ 19191  | DSNU-12-40-P-A            | –   |                   | –   |                   |
|               | 50     | ★ 19192  | DSNU-12-50-P-A            | –   |                   | –   |                   |
|               | 60     | ★ 1908258  | DSNU-12-60-P-A            | –   |                   | –   |                   |
|               | 80     | ★ 19193  | DSNU-12-80-P-A            | –   |                   | –   |                   |
|               | 100    | ★ 19194  | DSNU-12-100-P-A           | –   |                   | –   |                   |
|               | 125    | ★ 19195  | DSNU-12-125-P-A           | –   |                   | –   |                   |
|               | 160    | ★ 19196  | DSNU-12-160-P-A           | –   |                   | –   |                   |
|               | 200    | ★ 19197  | DSNU-12-200-P-A           | –   |                   | –   |                   |
| 16            | 10     | ★ 19198  | DSNU-16-10-P-A            | ★ 1908266   | DSNU-16-10-PPV-A  | ★ 1908274   | DSNU-16-10-PPS-A  |
|               | 15     | ★ 1908259  | DSNU-16-15-P-A            | ★ 1908267   | DSNU-16-15-PPV-A  | ★ 1908275   | DSNU-16-15-PPS-A  |
|               | 20     | ★ 1908260  | DSNU-16-20-P-A            | ★ 1908268   | DSNU-16-20-PPV-A  | ★ 1908276   | DSNU-16-20-PPS-A  |
|               | 25     | ★ 19199  | DSNU-16-25-P-A            | ★ 33973   | DSNU-16-25-PPV-A  | ★ 559263  | DSNU-16-25-PPS-A  |
|               | 30     | ★ 1908261  | DSNU-16-30-P-A            | ★ 1908269   | DSNU-16-30-PPV-A  | ★ 1908277   | DSNU-16-30-PPS-A  |
|               | 35     | ★ 1908262  | DSNU-16-35-P-A            | ★ 1908270   | DSNU-16-35-PPV-A  | ★ 1908278   | DSNU-16-35-PPS-A  |
|               | 40     | ★ 19200  | DSNU-16-40-P-A            | ★ 19229   | DSNU-16-40-PPV-A  | ★ 559264  | DSNU-16-40-PPS-A  |
|               | 50     | ★ 19201  | DSNU-16-50-P-A            | ★ 19230   | DSNU-16-50-PPV-A  | ★ 559265  | DSNU-16-50-PPS-A  |
|               | 60     | ★ 1908263  | DSNU-16-60-P-A            | ★ 1908271   | DSNU-16-60-PPV-A  | ★ 1908279   | DSNU-16-60-PPS-A  |
|               | 70     | ★ 1908264  | DSNU-16-70-P-A            | ★ 1908272   | DSNU-16-70-PPV-A  | ★ 1908280   | DSNU-16-70-PPS-A  |
|               | 80     | ★ 19202  | DSNU-16-80-P-A            | ★ 19231   | DSNU-16-80-PPV-A  | ★ 559266  | DSNU-16-80-PPS-A  |
|               | 100    | ★ 19203  | DSNU-16-100-P-A           | ★ 19232   | DSNU-16-100-PPV-A | ★ 559267  | DSNU-16-100-PPS-A |
|               | 125    | ★ 19204  | DSNU-16-125-P-A           | ★ 19233   | DSNU-16-125-PPV-A | ★ 559268  | DSNU-16-125-PPS-A |
|               | 150    | ★ 1908265  | DSNU-16-150-P-A           | ★ 1908273   | DSNU-16-150-PPV-A | ★ 1908281   | DSNU-16-150-PPS-A |
|               | 160    | ★ 19205  | DSNU-16-160-P-A           | ★ 19234   | DSNU-16-160-PPV-A | ★ 559269  | DSNU-16-160-PPS-A |
|               | 200    | ★ 19206  | DSNU-16-200-P-A           | ★ 19235   | DSNU-16-200-PPV-A | ★ 559270  | DSNU-16-200-PPS-A |

Data sheet

★ Core product range

| Ordering data |         |  |                           | PPV – Pneumatic cushioning, adjustable at both ends |                   | PPS – Pneumatic cushioning, self-adjusting at both ends |                   |
|---------------|---------|--|---------------------------|---|-------------------|---|-------------------|
| Piston ø      | Stroke  | P – Elastic cushioning rings/plates at both ends | A – With position sensing | A – With position sensing                           |                   | A – With position sensing                               |                   |
| [mm]          | [mm]    | Part no.   | Type                      | Part no.  | Type              | Part no.  | Type              |
| 20            | 10      | ★ 19207  | DSNU-20-10-P-A            | ★ 1908289   | DSNU-20-10-PPV-A  | ★ 1908297   | DSNU-20-10-PPS-A  |
|               | 15      | ★ 1908282  | DSNU-20-15-P-A            | ★ 1908290   | DSNU-20-15-PPV-A  | ★ 1908298   | DSNU-20-15-PPS-A  |
|               | 20      | ★ 1908283  | DSNU-20-20-P-A            | ★ 1908291   | DSNU-20-20-PPV-A  | ★ 1908299   | DSNU-20-20-PPS-A  |
|               | 25      | ★ 19208  | DSNU-20-25-P-A            | ★ 33974   | DSNU-20-25-PPV-A  | ★ 559271  | DSNU-20-25-PPS-A  |
|               | 30      | ★ 1908284  | DSNU-20-30-P-A            | ★ 1908292   | DSNU-20-30-PPV-A  | ★ 1908300   | DSNU-20-30-PPS-A  |
|               | 35      | ★ 1908285  | DSNU-20-35-P-A            | ★ 1908293   | DSNU-20-35-PPV-A  | ★ 1908301   | DSNU-20-35-PPS-A  |
|               | 40      | ★ 19209  | DSNU-20-40-P-A            | ★ 19236   | DSNU-20-40-PPV-A  | ★ 559272  | DSNU-20-40-PPS-A  |
|               | 50      | ★ 19210  | DSNU-20-50-P-A            | ★ 19237   | DSNU-20-50-PPV-A  | ★ 559273  | DSNU-20-50-PPS-A  |
|               | 60      | ★ 1908286  | DSNU-20-60-P-A            | ★ 1908294   | DSNU-20-60-PPV-A  | ★ 1908302   | DSNU-20-60-PPS-A  |
|               | 70      | ★ 1908287  | DSNU-20-70-P-A            | ★ 1908295   | DSNU-20-70-PPV-A  | ★ 1908303   | DSNU-20-70-PPS-A  |
|               | 80      | ★ 19211  | DSNU-20-80-P-A            | ★ 19238   | DSNU-20-80-PPV-A  | ★ 559274  | DSNU-20-80-PPS-A  |
|               | 100     | ★ 19212  | DSNU-20-100-P-A           | ★ 19239   | DSNU-20-100-PPV-A | ★ 559275  | DSNU-20-100-PPS-A |
|               | 125     | ★ 19213  | DSNU-20-125-P-A           | ★ 19240   | DSNU-20-125-PPV-A | ★ 559276  | DSNU-20-125-PPS-A |
|               | 150     | ★ 1908288  | DSNU-20-150-P-A           | ★ 1908296   | DSNU-20-150-PPV-A | ★ 1908304   | DSNU-20-150-PPS-A |
|               | 160     | ★ 19214  | DSNU-20-160-P-A           | ★ 19241   | DSNU-20-160-PPV-A | ★ 559277  | DSNU-20-160-PPS-A |
|               | 200     | ★ 19215  | DSNU-20-200-P-A           | ★ 19242   | DSNU-20-200-PPV-A | ★ 559278  | DSNU-20-200-PPS-A |
|               | 250     | ★ 19216  | DSNU-20-250-P-A           | ★ 19243   | DSNU-20-250-PPV-A | ★ 559279  | DSNU-20-250-PPS-A |
|               | 300     | ★ 19217  | DSNU-20-300-P-A           | ★ 19244   | DSNU-20-300-PPV-A | ★ 559280  | DSNU-20-300-PPS-A |
| 320           | ★ 34718 | DSNU-20-320-P-A                                  | ★ 34720                   | DSNU-20-320-PPV-A                                   | ★ 559281          | DSNU-20-320-PPS-A                                       |                   |
| 25            | 10      | ★ 19218  | DSNU-25-10-P-A            | ★ 1908312   | DSNU-25-10-PPV-A  | ★ 1908320   | DSNU-25-10-PPS-A  |
|               | 15      | ★ 1908305  | DSNU-25-15-P-A            | ★ 1908313   | DSNU-25-15-PPV-A  | ★ 1908321   | DSNU-25-15-PPS-A  |
|               | 20      | ★ 1908306  | DSNU-25-20-P-A            | ★ 1908314   | DSNU-25-20-PPV-A  | ★ 1908322   | DSNU-25-20-PPS-A  |
|               | 25      | ★ 19219  | DSNU-25-25-P-A            | ★ 33975   | DSNU-25-25-PPV-A  | ★ 559282  | DSNU-25-25-PPS-A  |
|               | 30      | ★ 1908307  | DSNU-25-30-P-A            | ★ 1908315   | DSNU-25-30-PPV-A  | ★ 1908323   | DSNU-25-30-PPS-A  |
|               | 35      | ★ 1908308  | DSNU-25-35-P-A            | ★ 1908316   | DSNU-25-35-PPV-A  | ★ 1908324   | DSNU-25-35-PPS-A  |
|               | 40      | ★ 19220  | DSNU-25-40-P-A            | ★ 19245   | DSNU-25-40-PPV-A  | ★ 559283  | DSNU-25-40-PPS-A  |
|               | 50      | ★ 19221  | DSNU-25-50-P-A            | ★ 19246   | DSNU-25-50-PPV-A  | ★ 559284  | DSNU-25-50-PPS-A  |
|               | 60      | ★ 1908309  | DSNU-25-60-P-A            | ★ 1908317   | DSNU-25-60-PPV-A  | ★ 1908325   | DSNU-25-60-PPS-A  |
|               | 70      | ★ 1908310  | DSNU-25-70-P-A            | ★ 1908318   | DSNU-25-70-PPV-A  | ★ 1908326   | DSNU-25-70-PPS-A  |
|               | 80      | ★ 19222  | DSNU-25-80-P-A            | ★ 19247   | DSNU-25-80-PPV-A  | ★ 559285  | DSNU-25-80-PPS-A  |
|               | 100     | ★ 19223  | DSNU-25-100-P-A           | ★ 19248   | DSNU-25-100-PPV-A | ★ 559286  | DSNU-25-100-PPS-A |
|               | 125     | ★ 19224  | DSNU-25-125-P-A           | ★ 19249   | DSNU-25-125-PPV-A | ★ 559287  | DSNU-25-125-PPS-A |
|               | 150     | ★ 1908311  | DSNU-25-150-P-A           | ★ 1908319   | DSNU-25-150-PPV-A | ★ 1908327   | DSNU-25-150-PPS-A |
|               | 160     | ★ 19225  | DSNU-25-160-P-A           | ★ 19250   | DSNU-25-160-PPV-A | ★ 559288  | DSNU-25-160-PPS-A |
|               | 200     | ★ 19226  | DSNU-25-200-P-A           | ★ 19251   | DSNU-25-200-PPV-A | ★ 559289  | DSNU-25-200-PPS-A |
|               | 250     | ★ 19227  | DSNU-25-250-P-A           | ★ 19252   | DSNU-25-250-PPV-A | ★ 559290  | DSNU-25-250-PPS-A |
|               | 300     | ★ 19228  | DSNU-25-300-P-A           | ★ 19253   | DSNU-25-300-PPV-A | ★ 559291  | DSNU-25-300-PPS-A |
| 320           | ★ 34719 | DSNU-25-320-P-A                                  | ★ 34721                   | DSNU-25-320-PPV-A                                   | ★ 559292          | DSNU-25-320-PPS-A                                       |                   |



## Data sheet

| Ordering data                |                |  |                 |   |                   |   |                   |
|------------------------------|----------------|--|-----------------|---|-------------------|---|-------------------|
| Piston $\varnothing$<br>[mm] | Stroke<br>[mm] | P – Elastic cushioning rings/plates at both ends |                 | PPV – Pneumatic cushioning, adjustable at both ends |                   | PPS – Pneumatic cushioning, self-adjusting at both ends |                   |
|                              |                | A – With position sensing                        |                 | A – With position sensing                           |                   | A – With position sensing                               |                   |
|                              |                | Part no.   | Type            | Part no.  | Type              | Part no.  | Type              |
| 8                            | 10             | 19177  | DSNU-8-10-P-A   | –   |                   | –   |                   |
|                              | 15             | 1908247  | DSNU-8-15-P-A   |   |                   |   |                   |
|                              | 20             | 1908248  | DSNU-8-20-P-A   |   |                   |   |                   |
|                              | 25             | 19178  | DSNU-8-25-P-A   |   |                   |   |                   |
|                              | 30             | 1908249  | DSNU-8-30-P-A   |   |                   |   |                   |
|                              | 40             | 19179  | DSNU-8-40-P-A   |   |                   |   |                   |
|                              | 50             | 19180  | DSNU-8-50-P-A   |   |                   |   |                   |
|                              | 60             | 1908250  | DSNU-8-60-P-A   |   |                   |   |                   |
|                              | 80             | 19181  | DSNU-8-80-P-A   |   |                   |   |                   |
| 100                          | 19182          | DSNU-8-100-P-A                                   |                 |   |                   |   |                   |
| 10                           | 10             | 19183  | DSNU-10-10-P-A  | –   |                   | –   |                   |
|                              | 15             | 1908251  | DSNU-10-15-P-A  |   |                   |   |                   |
|                              | 20             | 1908252  | DSNU-10-20-P-A  |   |                   |   |                   |
|                              | 25             | 19184  | DSNU-10-25-P-A  |   |                   |   |                   |
|                              | 30             | 1908253  | DSNU-10-30-P-A  |   |                   |   |                   |
|                              | 40             | 19185  | DSNU-10-40-P-A  |   |                   |   |                   |
|                              | 50             | 19186  | DSNU-10-50-P-A  |   |                   |   |                   |
|                              | 60             | 1908254  | DSNU-10-60-P-A  |   |                   |   |                   |
|                              | 80             | 19187  | DSNU-10-80-P-A  |   |                   |   |                   |
| 100                          | 19188          | DSNU-10-100-P-A                                  |                 |   |                   |   |                   |
| 25                           | 400            | 35191  | DSNU-25-400-P-A | 35193   | DSNU-25-400-PPV-A | 559293  | DSNU-25-400-PPS-A |
|                              | 500            | 35192  | DSNU-25-500-P-A | 35194   | DSNU-25-500-PPV-A | 559294  | DSNU-25-500-PPS-A |
| 32                           | 25             | 195980   | DSNU-32-25-P-A  | 196020  | DSNU-32-25-PPV-A  | 559295  | DSNU-32-25-PPS-A  |
|                              | 40             | 195981   | DSNU-32-40-P-A  | 196021  | DSNU-32-40-PPV-A  | 559296  | DSNU-32-40-PPS-A  |
|                              | 50             | 195982   | DSNU-32-50-P-A  | 196022  | DSNU-32-50-PPV-A  | 559297  | DSNU-32-50-PPS-A  |
|                              | 80             | 195983   | DSNU-32-80-P-A  | 196023  | DSNU-32-80-PPV-A  | 559298  | DSNU-32-80-PPS-A  |
|                              | 100            | 195984   | DSNU-32-100-P-A | 196024  | DSNU-32-100-PPV-A | 559299  | DSNU-32-100-PPS-A |
|                              | 125            | 195985   | DSNU-32-125-P-A | 196025  | DSNU-32-125-PPV-A | 559300  | DSNU-32-125-PPS-A |
|                              | 160            | 195986   | DSNU-32-160-P-A | 196026  | DSNU-32-160-PPV-A | 559301  | DSNU-32-160-PPS-A |
|                              | 200            | 195987   | DSNU-32-200-P-A | 196027  | DSNU-32-200-PPV-A | 559302  | DSNU-32-200-PPS-A |
|                              | 250            | 195988   | DSNU-32-250-P-A | 196028  | DSNU-32-250-PPV-A | 559303  | DSNU-32-250-PPS-A |
|                              | 320            | 195989   | DSNU-32-320-P-A | 196029  | DSNU-32-320-PPV-A | 559304  | DSNU-32-320-PPS-A |

Data sheet

| Ordering data    |                |  |                 |   |                   |   |                   |
|------------------|----------------|--|-----------------|---|-------------------|---|-------------------|
| Piston ø<br>[mm] | Stroke<br>[mm] | P – Elastic cushioning rings/plates at both ends |                 | PPV – Pneumatic cushioning, adjustable at both ends |                   | PPS – Pneumatic cushioning, self-adjusting at both ends |                   |
|                  |                | A – With position sensing                        |                 | A – With position sensing                           |                   | A – With position sensing                               |                   |
|                  |                | Part no.   | Type            | Part no.  | Type              | Part no.  | Type              |
| 40               | 25             | 195990   | DSNU-40-25-P-A  | 196030  | DSNU-40-25-PPV-A  | 559305  | DSNU-40-25-PPS-A  |
|                  | 40             | 195991   | DSNU-40-40-P-A  | 196031  | DSNU-40-40-PPV-A  | 559306  | DSNU-40-40-PPS-A  |
|                  | 50             | 195992   | DSNU-40-50-P-A  | 196032  | DSNU-40-50-PPV-A  | 559307  | DSNU-40-50-PPS-A  |
|                  | 80             | 195993   | DSNU-40-80-P-A  | 196033  | DSNU-40-80-PPV-A  | 559308  | DSNU-40-80-PPS-A  |
|                  | 100            | 195994   | DSNU-40-100-P-A | 196034  | DSNU-40-100-PPV-A | 559309  | DSNU-40-100-PPS-A |
|                  | 125            | 195995   | DSNU-40-125-P-A | 196035  | DSNU-40-125-PPV-A | 559310  | DSNU-40-125-PPS-A |
|                  | 160            | 195996   | DSNU-40-160-P-A | 196036  | DSNU-40-160-PPV-A | 559311  | DSNU-40-160-PPS-A |
|                  | 200            | 195997   | DSNU-40-200-P-A | 196037  | DSNU-40-200-PPV-A | 559312  | DSNU-40-200-PPS-A |
|                  | 250            | 195998   | DSNU-40-250-P-A | 196038  | DSNU-40-250-PPV-A | 559313  | DSNU-40-250-PPS-A |
| 320              | 195999         | DSNU-40-320-P-A                                  | 196039          | DSNU-40-320-PPV-A                                   | 559314            | DSNU-40-320-PPS-A                                       |                   |
| 50               | 25             | 196000   | DSNU-50-25-P-A  | 196040  | DSNU-50-25-PPV-A  | 559315  | DSNU-50-25-PPS-A  |
|                  | 40             | 196001   | DSNU-50-40-P-A  | 196041  | DSNU-50-40-PPV-A  | 559316  | DSNU-50-40-PPS-A  |
|                  | 50             | 196002   | DSNU-50-50-P-A  | 196042  | DSNU-50-50-PPV-A  | 559317  | DSNU-50-50-PPS-A  |
|                  | 80             | 196003   | DSNU-50-80-P-A  | 196043  | DSNU-50-80-PPV-A  | 559318  | DSNU-50-80-PPS-A  |
|                  | 100            | 196004   | DSNU-50-100-P-A | 196044  | DSNU-50-100-PPV-A | 559319  | DSNU-50-100-PPS-A |
|                  | 125            | 196005   | DSNU-50-125-P-A | 196045  | DSNU-50-125-PPV-A | 559320  | DSNU-50-125-PPS-A |
|                  | 160            | 196006   | DSNU-50-160-P-A | 196046  | DSNU-50-160-PPV-A | 559321  | DSNU-50-160-PPS-A |
|                  | 200            | 196007   | DSNU-50-200-P-A | 196047  | DSNU-50-200-PPV-A | 559322  | DSNU-50-200-PPS-A |
|                  | 250            | 196008   | DSNU-50-250-P-A | 196048  | DSNU-50-250-PPV-A | 559323  | DSNU-50-250-PPS-A |
| 320              | 196009         | DSNU-50-320-P-A                                  | 196049          | DSNU-50-320-PPV-A                                   | 559324            | DSNU-50-320-PPS-A                                       |                   |
| 63               | 25             | 196010   | DSNU-63-25-P-A  | 196050  | DSNU-63-25-PPV-A  | 559325  | DSNU-63-25-PPS-A  |
|                  | 40             | 196011   | DSNU-63-40-P-A  | 196051  | DSNU-63-40-PPV-A  | 559326  | DSNU-63-40-PPS-A  |
|                  | 50             | 196012   | DSNU-63-50-P-A  | 196052  | DSNU-63-50-PPV-A  | 559327  | DSNU-63-50-PPS-A  |
|                  | 80             | 196013   | DSNU-63-80-P-A  | 196053  | DSNU-63-80-PPV-A  | 559328  | DSNU-63-80-PPS-A  |
|                  | 100            | 196014   | DSNU-63-100-P-A | 196054  | DSNU-63-100-PPV-A | 559329  | DSNU-63-100-PPS-A |
|                  | 125            | 196015   | DSNU-63-125-P-A | 196055  | DSNU-63-125-PPV-A | 559330  | DSNU-63-125-PPS-A |
|                  | 160            | 196016   | DSNU-63-160-P-A | 196056  | DSNU-63-160-PPV-A | 559331  | DSNU-63-160-PPS-A |
|                  | 200            | 196017   | DSNU-63-200-P-A | 196057  | DSNU-63-200-PPV-A | 559332  | DSNU-63-200-PPS-A |
|                  | 250            | 196018   | DSNU-63-250-P-A | 196058  | DSNU-63-250-PPV-A | 559333  | DSNU-63-250-PPS-A |
| 320              | 196019         | DSNU-63-320-P-A                                  | 196059          | DSNU-63-320-PPV-A                                   | 559334            | DSNU-63-320-PPS-A                                       |                   |


## Data sheet

| Ordering data          |            |  |                   |   |      |
|------------------------|------------|--|-------------------|---|------|
| Piston $\varnothing$   | Stroke     | P – Elastic cushioning rings/plates at both ends |                   | PPV – Pneumatic cushioning, adjustable at both ends |      |
| [mm]                   | [mm]       | A – With position sensing                        |                   | A – With position sensing                           |      |
|                        |            | Part no.   | Type              | Part no.  | Type |
| <b>Variable stroke</b> |            |  |                   |   |      |
| 8                      | 10 ... 100 | 14326  | DSNU-8-...-P-A    |   |      |
| 10                     | 10 ... 100 | 14325  | DSNU-10-...-P-A   |   |      |
| 12                     | 10 ... 200 | 14324  | DSNU-12-...-P-A   |   |      |
| 16                     | 10 ... 200 | 14323  | DSNU-16-...-P-A   |   |      |
| 20                     | 10 ... 320 | 14328  | DSNU-20-...-P-A   |   |      |
| 25                     | 10 ... 500 | 14327  | DSNU-25-...-P-A   |   |      |
| <b>Variable stroke</b> |            |  |                   |   |      |
|                        |            |  |                   |   |      |
|                        |            | 14320  | DSNU-16-...-PPV-A |   |      |
|                        |            | 14321  | DSNU-20-...-PPV-A |   |      |
|                        |            | 14322  | DSNU-25-...-PPV-A |   |      |

Ordering data – Modular product system

| Ordering table   |  |               |   |   |               |               |            |        |             |      |
|------------------|--|---------------|---|---|---------------|---------------|------------|--------|-------------|------|
| Size             | 8  | 10            | 12  | 16  | 20            | 25            | Conditions | Code   | Enter code  |      |
| Module no.       | <b>193986</b>  | <b>193987</b> | <b>193988</b>                                 | <b>193989</b>                                     | <b>193990</b> | <b>193991</b> |            |        |             |      |
| Function         | Round cylinder, double-acting, based on ISO 6432             |               |   |   |               |               |            |        | <b>DSNU</b> | DSNU |
| Piston ø [mm]    | 8  | 10            | 12  | 16  | 20            | 25            |            | ★ -... |             |      |
| Stroke [mm]      | 1 ... 100  |               | 1 ... 200                                     |   | 1 ... 320     | 1 ... 500     | [1]        | ★ -... |             |      |
| Cushioning       | Elastic cushioning rings/plates at both ends                 |               |   |   |               |               |            |        | ★ -P        |      |
|                  | -  | -             | Pneumatic cushioning, adjustable at both ends |   |               |               | [2]        | ★ -PPV |             |      |
|                  | -  | -             | -   | Pneumatic cushioning, self-adjusting at both ends |               |               |            | [3]    | ★ -PPS      |      |
| Position sensing | Via proximity switch   |               |   |   |               |               |            | [4]    | ★ -A        |      |
| Cylinder end cap | Lateral supply port, short end cap                           |               |   |   |               |               |            | [5]    | ★ -MQ       |      |
|                  | Axial supply port, short end cap                             |               |   |   |               |               |            | [5]    | -MA         |      |
|                  | With mounting flange at front (direct mounting), bearing cap |               |   |   |               |               |            | [6]    | -MH         |      |
| Piston rod type  | Through piston rod   |               |   |   |               |               |            | [7]    | ★ -S2       |      |

- [1] -... Longer strokes on request
- [2] PPV Not with MA. In combination with S6, S10, S11 not with piston diameter 12 mm
- [3] PPS Not with MA, MH, S6, S10, S11 and not with combination MQ-R3
- [4] A Minimum stroke: 10 mm
- [5] MQ, MA Not with S2, S10, S11
- [6] MH Not with combination S6-R3. Not with S10, S11
- [7] S2 Not with S10, S11

 **Note**

The bellows kit DADB must not be used in combination with the variant MH.

The running characteristics change slightly when the bellows kit DADB is combined with the variant S10 or S11

## Ordering data – Modular product system


| Ordering table                 |      | 8                                | 10        | 12  | 16        | 20   | 25   | Conditions | Code     | Enter code |  |
|--------------------------------|------|----------------------------------|-----------|---|-----------|------|------|------------|----------|------------|--|
| Extended male thread           |      | Extended male piston rod thread  |           |   |           |      |      |            |          |            |  |
|                                | [mm] | 1 ... 15                         | 1 ... 20  | 1 ... 25  | 1 ... 35  | [8]  |      | -...K2     |          |            |  |
| Shortened male thread          |      | Shortened male piston rod thread |           |   |           |      |      |            |          |            |  |
|                                | [mm] | 1 ... 4                          | 1 ... 8   | 1 ... 10  |           | [9]  |      | -...K6     |          |            |  |
| Female thread                  |      | Piston rod with female thread    |           |   |           |      |      |            |          |            |  |
|                                |      | -                                | -         | -   | -         | (M4) | (M6) | [10]       | ★ -K3    |            |  |
| Custom thread                  |      | Custom piston rod thread         |           |   |           |      |      |            |          |            |  |
|                                |      | -                                | -         | -   | -         | -    | M10  |            | -“...”K5 |            |  |
| Extended piston rod at one end |      | Extended piston rod at one end   |           |   |           |      |      |            |          |            |  |
|                                | [mm] | 1 ... 50                         | 1 ... 100 | 1 ... 110   | 1 ... 150 |      |      | ★ ...K8    |          |            |  |
| Temperature resistance         |      | Heat-resistant seals max. 120°C  |           |   |           |      | [11] |            | ★ -S6    |            |  |
| Constant motion                |      | -                                | -         | Slow speed (constant motion at low piston speeds) |           |      | [12] |            | -S10     |            |  |
| Low friction                   |      | -                                | -         | Low friction                                      |           |      | [13] |            | -S11     |            |  |
| Corrosion protection           |      | -                                | -         | High corrosion protection                         |           |      |      |            | ★ -R3    |            |  |
| EU certification               |      | II 2GD                           |           |   |           |      | [14] |            | -EX4     |            |  |

|      |     |                   |
|------|-----|-------------------|
| [8]  | K2  | Not with K3, K6   |
| [9]  | K6  | Not with K3       |
| [10] | K3  | Not with K5       |
| [11] | S6  | Not with S10, S11 |
| [12] | S10 | Not with S11, R3  |
| [13] | S11 | Not with R3       |
| [14] | EX4 | Not with S6       |

## Ordering data – Modular product system

| Ordering table   |   |               |               |               |            |             |            |
|------------------|---|---------------|---------------|---------------|------------|-------------|------------|
| Size             | 32  | 40            | 50            | 63            | Conditions | Code        | Enter code |
| Module no.       | <b>193992</b>   | <b>193993</b> | <b>193994</b> | <b>193995</b> |            |             |            |
| Function         | Double-acting round cylinder                            |               |               |               |            | <b>DSNU</b> | DSNU       |
| Piston ø [mm]    | 32  | 40            | 50            | 63            |            | ★ -...      |            |
| Stroke [mm]      | 1 ... 500   |               |               |               | [1]        | ★ -...      |            |
| Cushioning       | Elastic cushioning rings/plates at both ends            |               |               |               |            | ★ -P        |            |
|                  | Pneumatic cushioning, adjustable at both ends           |               |               |               | [2]        | ★ -PPV      |            |
|                  | Pneumatic cushioning, self-adjusting at both ends       |               |               |               | [3]        | ★ -PPS      |            |
| Position sensing | Via proximity switch                                    |               |               |               | [4]        | ★ -A        |            |
| Cylinder end cap | Lateral supply port, short end cap                      |               |               |               | [5]        | ★ -MQ       |            |
|                  | Axial supply port, short end cap                        |               |               |               | [6]        | -MA         |            |
|                  | Mounting flange at front (direct mounting), bearing cap |               |               |               | [7]        | -MH         |            |
| Piston rod type  | Through piston rod                                      |               |               |               | [8]        | ★ -S2       |            |

- [1] -... Longer strokes on request
- [2] PPV Not with MA
- [3] PPS Not with MA, MH, S6, S10, S11 and not with combination MQ-R3 and R8
- [4] A Minimum stroke: 10 mm
- [5] MQ Not with S2, S10, S11
- [6] MA Not with S2, S10, S11, R8
- [7] MH Not with combination S6-R3. Not with S10, S11, R8
- [8] S2 Not with S10, S11

 **Note**

The bellows kit DADB must not be used in combination with the variant MH.

The running characteristics change slightly when the bellows kit DADB is combined with the variant S10 or S11

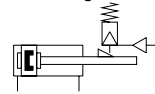
## Ordering data – Modular product system

| Ordering table                 |      | 32  | 40   | 50       | 63 | Conditions | Code     | Enter code |
|--------------------------------|------|---|------|----------|----|------------|----------|------------|
| Extended male thread           |      | Extended male piston rod thread                   |      |          |    |            |          |            |
|                                | [mm] | 1 ... 35  |      | 1 ... 70 |    | [9]        | -...K2   |            |
| Shortened male thread          |      | Shortened male piston rod thread                  |      |          |    |            |          |            |
|                                | [mm] | 1 ... 8   |      | 1 ... 10 |    | [10]       | -...K6   |            |
| Female thread                  |      | Piston rod with female thread                     |      |          |    |            |          |            |
|                                |      | (M6)  | (M8) | (M10)    |    | [11]       | ★ -K3    |            |
| Custom thread                  |      | Custom piston rod thread                          |      |          |    |            |          |            |
|                                |      | M10   | M12  | M16      |    |            | -“...”K5 |            |
| Extended piston rod at one end |      | Extended piston rod at one end                    |      |          |    |            |          |            |
|                                | [mm] | 1 ... 500   |      |          |    |            | ★ ...K8  |            |
| Temperature resistance         |      | Heat-resistant seals max. 120°C                   |      |          |    | [12]       | ★ -S6    |            |
| Constant motion                |      | Slow speed (constant motion at low piston speeds) |      |          |    | [13]       | -S10     |            |
| Running characteristic         |      | Low friction                                      |      |          |    | [14]       | -S11     |            |
| Corrosion protection           |      | High corrosion protection                         |      |          |    | [15]       | ★ -R3    |            |
| Wiper seal                     |      | Dust protection                                   |      |          |    |            | -R8      |            |
|                                |      | Metal scraper                                     |      |          |    | [16]       | -A6      |            |
| EU certification               |      | II 2GD  |      |          |    | [17]       | -EX4     |            |

|      |     |  |
|------|-----|--|
| [9]  | K2  | Not with K3, K6                            |
| [10] | K6  | Not with K3                                |
| [11] | K3  | Not with K5                                |
| [12] | S6  | Not with S10, S1                           |
| [13] | S10 | Not with S11, R3, R8                       |
| [14] | S11 | Not with R3, R8                            |
| [15] | R3  | Not with R8                                |
| [16] | A6  | Not with S10, S11, MH, P, PPS, S6, R3, EX4 |
| [17] | EX4 | Not with S6, S10, S11                      |

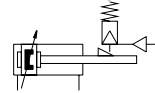
## Data sheet


### P cushioning



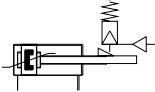
-  - Diameter  
8 ... 25 mm  
ISO 6432


### PPV cushioning

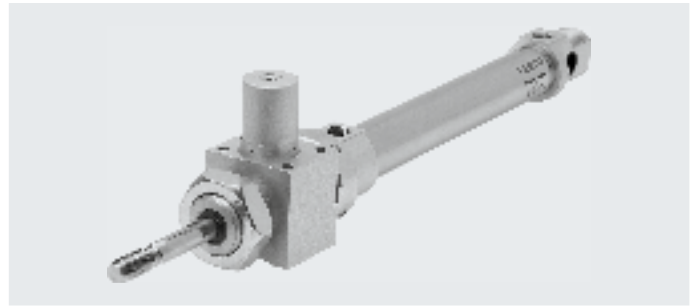


-  - Diameter  
32 ... 63 mm

### PPS cushioning



-  - Stroke length  
1 ... 500 mm



### - - Note

If used in safety-relevant applications, additional measures are necessary, e.g. in Europe the standards listed in the EC Machinery Directive must be observed. Without additional measures in accordance with legally specified minimum requirements, the product is not suitable as a safety-related component in control systems.

### General technical data

| Piston $\varnothing$                   | 8  | 10 | 12                                      | 16  | 20        | 25       | 32        | 40       | 50      | 63      |  |
|--|--|----|---|-----|-----------|----------|-----------|----------|---------|---------|--|
| Based on standard                      | ISO 6432                                     |    |   |     |           |          | -         |          |         |         |  |
| Pneumatic connection                   | M5   | M5 | M5                                      | M5  | G1/8      | G1/8     | G1/8      | G1/4     | G1/4    | G3/8    |  |
| Piston rod thread                      | M4   | M4 | M6                                      | M6  | M8        | M10x1.25 | M10x1.25  | M12x1.25 | M16x1.5 | M16x1.5 |  |
| Stroke <sup>1)</sup> [mm]              | 1 ... 100                                    |    | 1 ... 200                               |     | 1 ... 320 |          | 1 ... 500 |          |         |         |  |
| Design                                 | Piston/piston rod/cylinder barrel            |    |   |     |           |          |           |          |         |         |  |
| Cushioning                             |  |    |   |     |           |          |           |          |         |         |  |
| DSNU...-P                              | Elastic cushioning rings/plates at both ends |    |   |     |           |          |           |          |         |         |  |
| DSNU...-PPV                            | -  |    | Cushioning, adjustable at both ends     |     |           |          |           |          |         |         |  |
| DSNU...-PPS                            | -  |    | Cushioning, self-adjusting at both ends |     |           |          |           |          |         |         |  |
| Cushioning length                      |  |    |   |     |           |          |           |          |         |         |  |
| DSNU...-PPV [mm]                       | -  |    | 9                                       | 12  | 15        | 17       | 14        | 18       | 20      | 21      |  |
| DSNU...-PPS [mm]                       | -  |    | 12                                      | 15  | 17        | 14       | 18        | 20       | 21      |         |  |
| Position sensing                       | Via proximity switch                         |    |   |     |           |          |           |          |         |         |  |
| Type of mounting                       | With through-hole                            |    |   |     |           |          |           |          |         |         |  |
|  | With accessories                             |    |   |     |           |          |           |          |         |         |  |
| Mounting position                      | Any  |    |   |     |           |          |           |          |         |         |  |
| Holding force of the clamping unit [N] | 80   | 80 | 180                                     | 180 | 350       | 350      | 600       | 1000     | 1400    | 2000    |  |
| Axial backlash under load [mm]         | 0.2  |    |   | 0.3 |           | 0.5      |           | 0.8      |         |         |  |
| Pneumatic connection on clamping unit  | M5   |    |   |     |           |          |           | G1/8     |         |         |  |

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.  
Longer strokes on request



## Data sheet

| Operating and environmental conditions       |  |
|--|--|
| Operating medium                             | Compressed air to ISO 8573-1:2010 [7:4:4]  |
| Note on the operating/<br>pilot medium       | Lubricated operation possible (in which case lubricated operation will always be required) |
| Operating pressure [bar]                     | 3 ... 10   |
| Ambient temperature [°C]                     | -10 ... +80  |
| Corrosion resistance class CRC <sup>2)</sup> |  |
| DSNU-...                                     | 2  |
| DSNU...-R3                                   | 3  |

1) Note operating range of proximity switches

2) 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 which are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

| Forces [N] and impact energy [J]                                  |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|
| Piston Ø  | 8    | 10   | 12   | 16   | 20   | 25   | 32   | 40   | 50   | 63   |
| Theoretical force at 6 bar, advancing                             | 30   | 47   | 68   | 121  | 189  | 295  | 483  | 753  | 1178 | 1870 |
| Theoretical force at 6 bar, retracting                            | 23   | 40   | 51   | 104  | 158  | 247  | 415  | 633  | 990  | 1682 |
| Impact energy in the end positions for P cushioning <sup>1)</sup> | 0.03 | 0.05 | 0.07 | 0.15 | 0.20 | 0.30 | 0.40 | 0.70 | 1    | 1.3  |

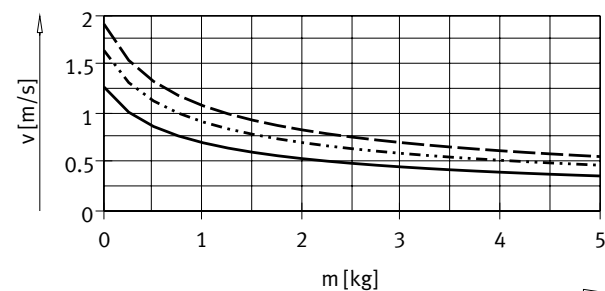
1) The values are reduced by approx. 50% at an ambient temperature of 80°C

| Weight [g]                         |      |       |      |       |       |     |       |      |      |      |
|------------------------------------|------|-------|------|-------|-------|-----|-------|------|------|------|
| Piston Ø                           | 8    | 10    | 12   | 16    | 20    | 25  | 32    | 40   | 50   | 63   |
| Product weight with 0 mm stroke    | 97.6 | 100.3 | 193  | 207.9 | 393.8 | 456 | 711.5 | 1287 | 2059 | 2556 |
| Additional weight per 10 mm stroke | 2.4  | 2.7   | 4    | 4.6   | 7.2   | 11  | 15.5  | 24   | 40   | 44   |
| Moving mass with 0 mm stroke       | 7.5  | 8.5   | 18.5 | 23    | 44    | 71  | 121   | 230  | 413  | 459  |
| Moving mass per 10 mm stroke       | 1    | 1     | 2    | 2     | 4     | 6   | 9     | 16   | 25   | 25   |

Data sheet

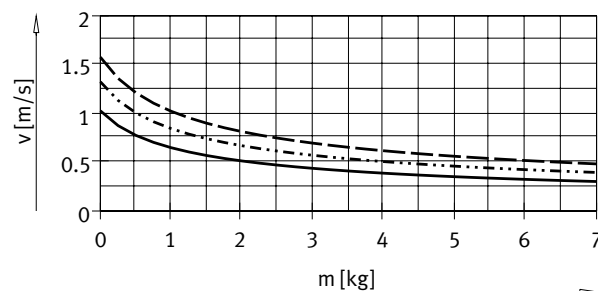
Average piston speed  $v$  as a function of payload  $m$  in combination with cushioning PPS

Piston  $\varnothing 16$



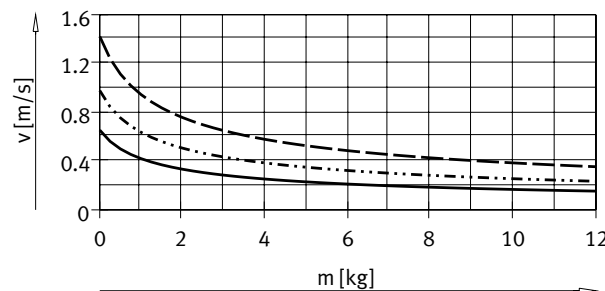
- DSNU-16-50
- ⋯ DSNU-16-100
- - - DSNU-16-200

Piston  $\varnothing 20$



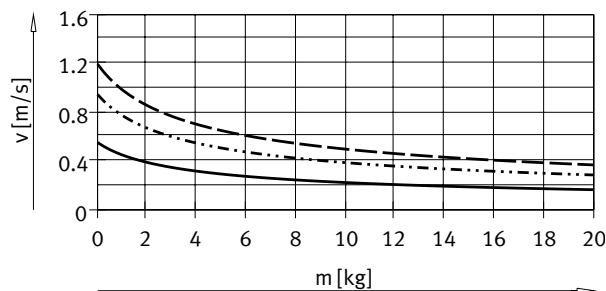
- DSNU-20-50
- ⋯ DSNU-20-100
- - - DSNU-20-200

Piston  $\varnothing 25$



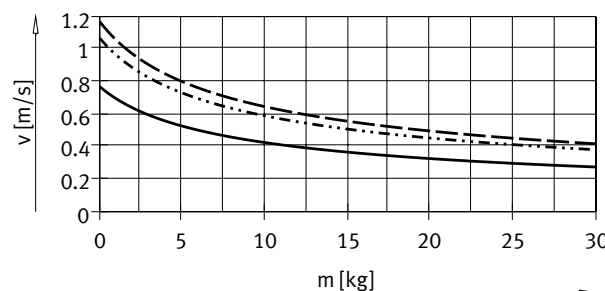
- DSNU-25-50
- ⋯ DSNU-25-100
- - - DSNU-25-200

Piston  $\varnothing 32$



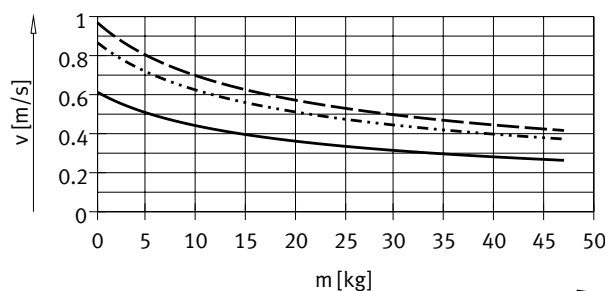
- DSNU-32-50
- ⋯ DSNU-32-100
- - - DSNU-32-200

Piston  $\varnothing 40$



- DSNU-40-50
- ⋯ DSNU-40-100
- - - DSNU-40-200

Piston  $\varnothing 50$



- DSNU-50-50
- ⋯ DSNU-50-100
- - - DSNU-50-200

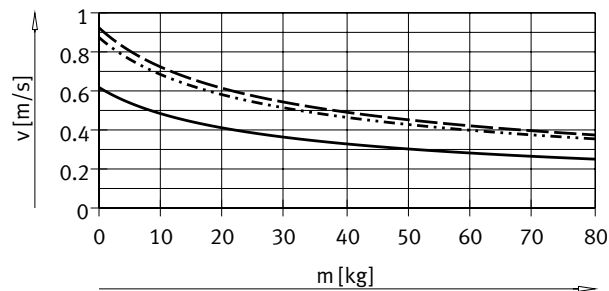
Data sheet

Average piston speed  $v$  as a function of payload  $m$  in combination with cushioning PPS

Piston  $\varnothing$  63

Note:

Average piston speed  
= Stroke/movement time

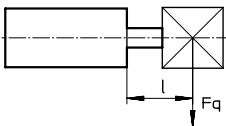


Engineering software for  
P cushioning  
PPV cushioning  
→ [https://www.festo.com/eap/en\\_gb/PneumaticSizing/](https://www.festo.com/eap/en_gb/PneumaticSizing/)

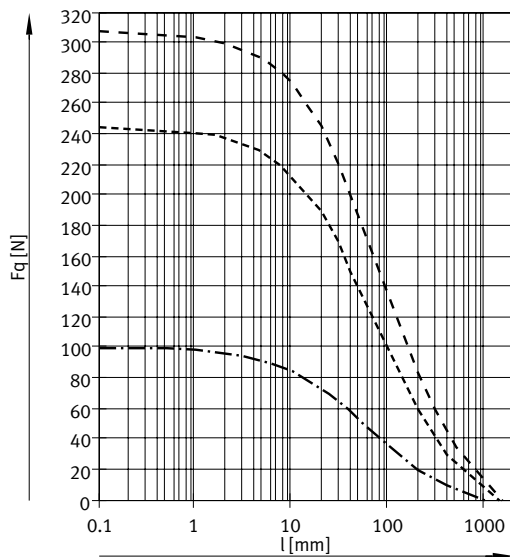
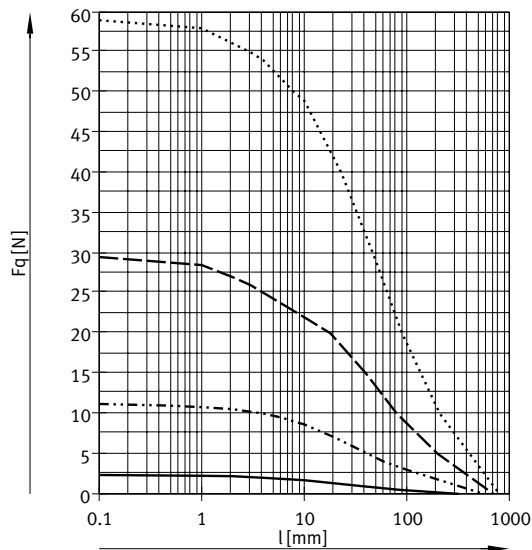
Additional graphs for  
PPS cushioning  
→ [www.festo.com](http://www.festo.com)

- DSNU-63-50
- DSNU-63-100
- - - DSNU-63-200

Max. transverse load  $F_q$  as a function of projection  $l$



DSNU-...

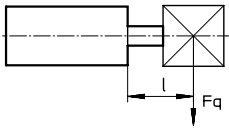


- DSNU-8/10
- DSNU-12/16
- - - DSNU-20
- DSNU-25

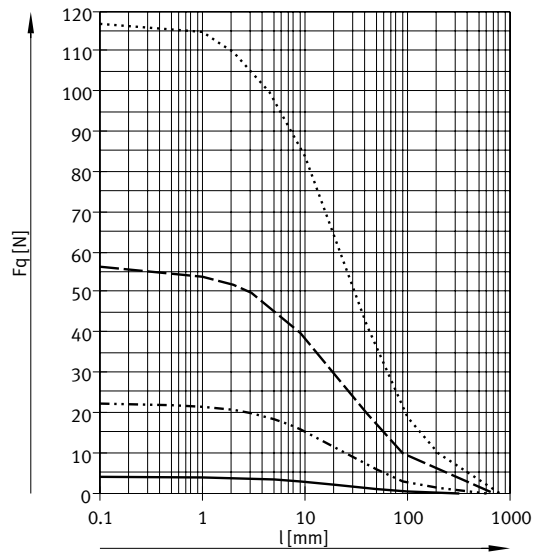
- DSNU-32
- - - DSNU-40
- · - DSNU-50/63

Data sheet

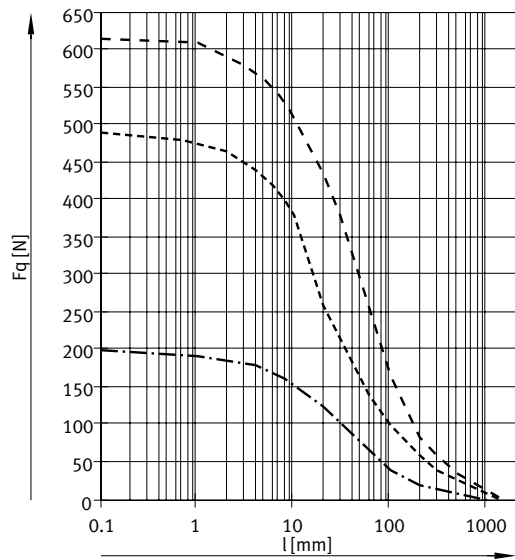
Max. transverse load  $F_q$  as a function of projection  $l$



DSNU-....S2 – Through piston rod



- DSNU-8/10
- · - · - DSNU-12/16
- - - DSNU-20
- · · · · DSNU-25

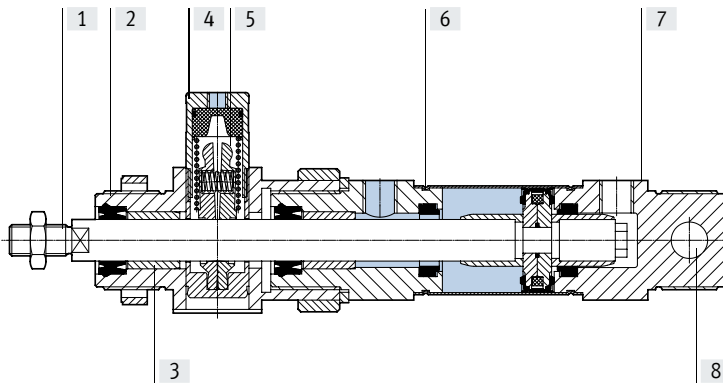


- · - · - DSNU-32
- - - DSNU-40
- - - DSNU-50/63

## Data sheet

### Materials

#### Sectional view



#### Round cylinder

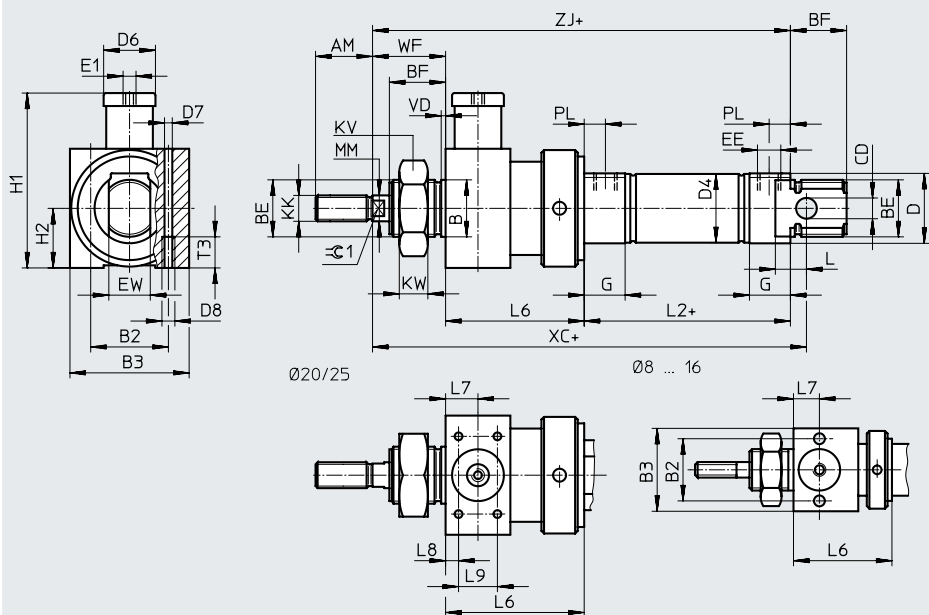
|     |                        |                            |
|-----|------------------------|----------------------------|
| [1] | Piston rod             |                            |
|     | DSNU-...               | High-alloy steel           |
|     | DSNU-...-R3            | High-alloy stainless steel |
| [2] | Bearing cap            | Anodised aluminium         |
| [3] | Piston rod bearing     | Sintered bronze            |
| [4] | Housing, clamping unit | Wrought aluminium alloy    |
| [5] | Clamping jaw           | Brass                      |
| [6] | Cylinder barrel        | High-alloy stainless steel |
| [7] | End cap                | Anodised aluminium         |
| -   | Piston, clamping unit  | POM                        |
| -   | Spring                 | Spring steel               |
| -   | Seals                  | TPE-U(PU), NBR             |
|     | Note on materials      | RoHS-compliant             |
| [8] | Swivel bearing         | Polymer                    |

Data sheet

Dimensions

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

DSNU-8 ... 25



**Note**  
 - Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.  
 + = plus stroke length

| ∅<br>[mm] | AM   | B<br>∅<br>h9 | B2   | B3 | BE       | BF | CD<br>∅<br>H9 | D<br>∅ | D4<br>∅ | D6<br>∅ | D7<br>∅ | D8 |
|-----------|------|--------------|------|----|----------|----|---------------|--------|---------|---------|---------|----|
| 8         | 12   | 12           | 19.5 | 27 | M12x1.25 | 12 | 4             | 15     | 9.3     | 12      | 4.2     | M5 |
| 10        | 16   | 16           | 24   | 32 | M16x1.5  | 17 | 6             | 20     | 11.3    |         |         |    |
| 12        |      |              |      |    |          |    |               |        | 13.3    |         |         |    |
| 16        | 17.3 |              |      |    |          |    |               |        |         |         |         |    |
| 20        | 20   | 22           | 27   | 36 | M22x1.5  | 20 | 8             | 27     | 21.3    | 20      |         |    |
| 25        | 22   |              |      |    |          | 22 |               |        | 26.5    |         |         |    |

| ∅<br>[mm] | E1   | EE | EW | G  | H1   | H2   | KK       | KV | KW | MM<br>∅ | L  | L2   |
|-----------|------|----|----|----|------|------|----------|----|----|---------|----|------|
| 8         | M5   | M5 | 8  | 10 | 34.5 | 13.5 | M4       | 19 | 6  | 4       | 6  | 46   |
| 10        |      |    | 12 |    | 41   | 16   | M6       | 24 | 8  | 6       | 9  | 50   |
| 12        | G1/8 | 16 | 16 | 16 | 62.5 | 18   | M8       | 32 | 11 | 8       | 12 | 56   |
| 16        |      |    |    |    |      |      | M10x1.25 |    |    |         |    | 68   |
| 20        |      |    |    |    |      |      | 10       |    |    |         |    | 69.5 |
| 25        |      |    |    |    |      |      |          |    |    |         |    |      |

| ∅<br>[mm] | L6       | L7 | L8  | L9 | T3  | PL  | VD | WF | XC<br>±1 | ±1  |
|-----------|----------|----|-----|----|-----|-----|----|----|----------|-----|
| 8         | 29 ±0.65 | 8  | -   | -  | 11  | 6   | 2  | 16 | 93       | -   |
| 10        | -        |    | -   | -  |     |     |    |    |          | -   |
| 12        | 38 ±0.75 | 10 | -   | -  | 8.2 | 8.2 | 24 | 22 | 113      | 5   |
| 16        |          |    | -   | -  |     |     |    |    |          | -   |
| 20        | 47 ±0.75 | 13 | 4.5 | 20 | 8.2 | 8.2 | 24 | 28 | 142      | 7   |
| 25        | 48 ±0.75 |    |     |    |     |     |    |    |          | 152 |

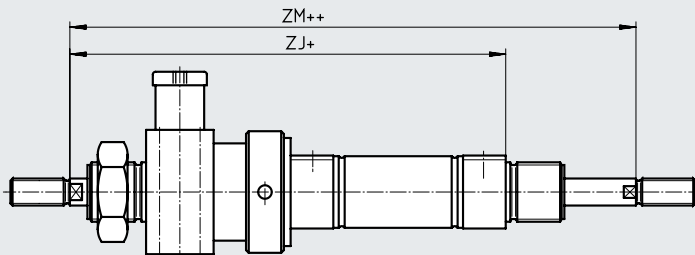
Data sheet

Dimensions


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DSNU-8 ... 25

S2 – Through piston rod



+ = plus stroke length  
++ = plus 2x stroke length

 **Note**

The thread types at both piston rod ends are identical. The clamping unit is mounted at only one end.

In combination with variant Q (→ page 46) the right piston rod is square, the left piston rod round. The clamping unit is mounted on the left-hand, round piston rod.

In combination with variant K8, the piston rod is only extended at the right piston rod. The clamping unit is mounted on the left piston rod that is not extended.

In combination with variant K8 and Q, the piston rod is only extended at the right, square piston rod.

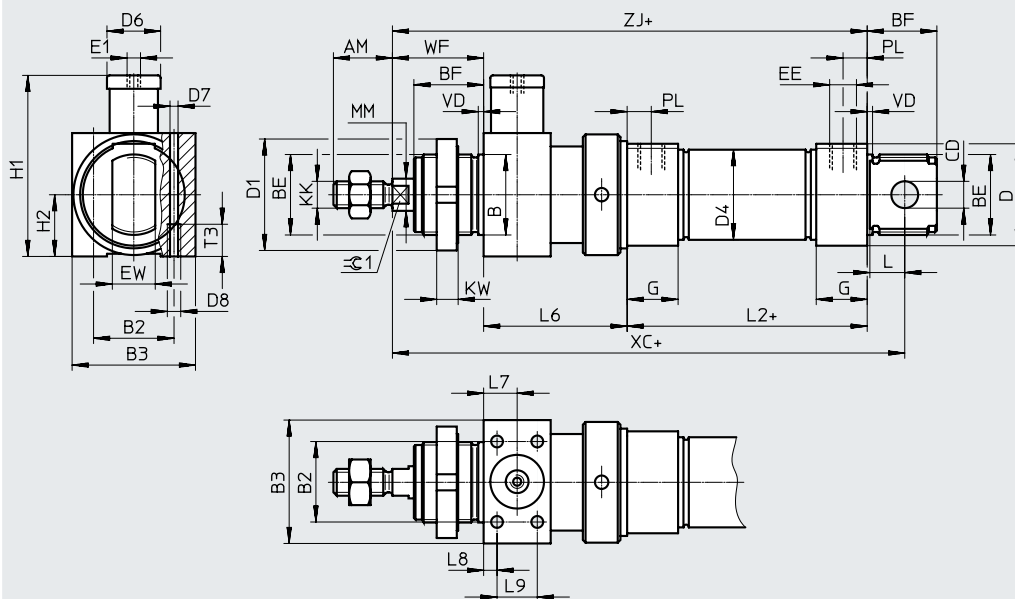
| ∅<br>[mm] | ZJ    | ZM    |
|-----------|-------|-------|
| 8         | 91    | 107   |
| 10        |       |       |
| 12        | 110   | 132   |
| 16        | 116   | 138   |
| 20        | 139   | 163   |
| 25        | 145.5 | 173.5 |

Data sheet

Dimensions

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DSNU-8 ... 25



+ = plus stroke length

| ∅  | AM | B<br>∅<br>h9 | B2 | B3 | BE      | BF | CD<br>∅<br>E10 | D<br>∅ | D1<br>∅ | D4<br>∅ | D6 | D7  |
|----|----|--------------|----|----|---------|----|----------------|--------|---------|---------|----|-----|
| 32 | 22 | 30           | 30 | 46 | M30x1.5 | 26 | 10             | 38     | 42      | 33.6    | 20 | 4.4 |
| 40 | 24 | 38           | 36 | 56 | M38x1.5 | 30 | 12             | 46     | 50      | 41.6    | 24 | 6.8 |
| 50 | 32 | 45           | 50 | 65 | M45x1.5 | 33 | 16             | 57     | 60      | 52.4    | 30 | 8.5 |
| 63 |    |              | 54 | 72 | M45x1.5 |    |                | 70     |         | 65.4    |    |     |

| ∅  | D8  | E1   | EE   | EW | G     | H1    | H2   | KK       | KW | MM<br>∅ | L  | L2   |
|----|-----|------|------|----|-------|-------|------|----------|----|---------|----|------|
| 32 | M5  | M5   | G1/8 | 16 | 19    | 67.5  | 23   | M10x1.25 | 8  | 12      | 13 | 69.5 |
| 40 | M8  | G1/8 | G1/4 | 18 | 25    | 89    | 28   | M12x1.25 | 10 | 16      | 15 | 84.6 |
| 50 | M10 | G1/8 |      | 21 |       | 107.5 | 32.5 | M16x1.5  |    | 20      | 16 | 86.2 |
| 63 |     | G1/8 | G3/8 | 28 | 121.5 | 36    |      |          |    | 94.2    |    |      |

| ∅  | L6    | L7   | L8 | L9 | T3 | PL | VD | WF   | XC    | ⊖1 |
|----|-------|------|----|----|----|----|----|------|-------|----|
|    | ±0.75 |      |    |    |    |    |    |      | ±1    |    |
| 32 | 55    | 12.5 | 5  | 15 | 12 | 9  | 2  | 34.5 | 173   | 10 |
| 40 | 69    | 17   | 7  | 20 | 18 | 12 | 3  | 40.5 | 210.1 | 13 |
| 50 | 78    | 20   |    | 26 | 20 | 20 |    | 45.5 | 226.7 | 17 |
| 63 | 86    | 24   | 8  | 32 | 21 | 13 |    | 46.5 | 243.7 |    |



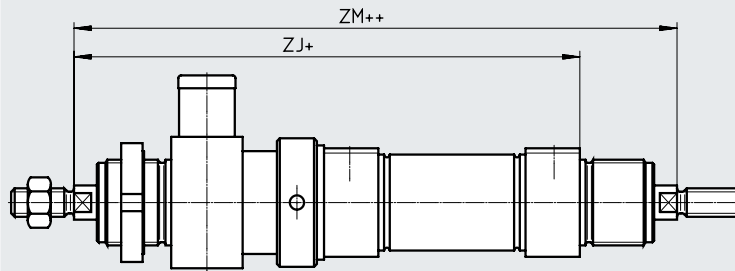
Data sheet

Dimensions

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DSNU-32 ... 63

S2 – Through piston rod



+ = plus stroke length  
++ = plus 2x stroke length

**Note**

The thread types at both piston rod ends are identical. The clamping unit is mounted at only one end.

In combination with variant Q (→ page 46) the right piston rod is square, the left piston rod round. The clamping unit is mounted on the left-hand, round piston rod.

In combination with variant K8, the piston rod is only extended at the right piston rod. The clamping unit is mounted on the left piston rod that is not extended.

In combination with variant K8 and Q, the piston rod is only extended at the right, square piston rod.

| ∅<br>[mm] | ZJ    | ZM    |
|-----------|-------|-------|
| 32        | 159   | 191   |
| 40        | 194.1 | 230.1 |
| 50        | 209.7 | 250.7 |
| 63        | 226.7 | 268.7 |

Ordering data – Modular product system

| Ordering table   |  |               |   |   |               |               |            |             |             |      |
|------------------|--|---------------|---|---|---------------|---------------|------------|-------------|-------------|------|
| Size             | 8  | 10            | 12  | 16  | 20            | 25            | Conditions | Code        | Enter code  |      |
| Module no.       | <b>193986</b>                                    | <b>193987</b> | <b>193988</b>                                 | <b>193989</b>                                     | <b>193990</b> | <b>193991</b> |            |             |             |      |
| Function         | Round cylinder, double-acting, based on ISO 6432 |               |   |   |               |               |            |             | <b>DSNU</b> | DSNU |
| Piston ø [mm]    | 8  | 10            | 12  | 16  | 20            | 25            |            | -...        |             |      |
| Stroke [mm]      | 1 ... 100  |               | 1 ... 200                                     |   | 1 ... 320     | 1 ... 500     | [1]        | -...        |             |      |
| Cushioning       | Elastic cushioning rings/plates at both ends     |               |   |   |               |               |            |             | <b>-P</b>   |      |
|                  | -  | -             | Pneumatic cushioning, adjustable at both ends |   |               |               | [2]        | <b>-PPV</b> |             |      |
|                  | -  | -             | -   | Pneumatic cushioning, self-adjusting at both ends |               |               | [3]        | <b>-PPS</b> |             |      |
| Position sensing | Via proximity switch                             |               |   |   |               |               | [4]        | <b>-A</b>   |             |      |
| Cylinder end cap | Lateral supply port, short end cap               |               |   |   |               |               | [5]        | <b>-MQ</b>  |             |      |
|                  | Axial supply port, short end cap                 |               |   |   |               |               | [5]        | <b>-MA</b>  |             |      |
| Piston rod type  | Through piston rod                               |               |   |   |               |               |            | <b>-S2</b>  |             |      |

- [1] -... Longer strokes on request
- [2] PPV Not with MA
- [3] PPS Not with MA, MH and not with combination MQ-R3
- [4] A Minimum stroke: 10 mm
- [5] MQ, MA Not with S2

## Ordering data – Modular product system

| Ordering table                 |      | 8                                | 10        | 12        | 16        | 20   | 25   | Conditions | Code     | Enter code |     |
|--------------------------------|------|----------------------------------|-----------|-----------|-----------|------|------|------------|----------|------------|-----|
| Extended male thread           |      | Extended male piston rod thread  |           |           |           |      |      |            |          |            |     |
|                                | [mm] | 1 ... 15                         | 1 ... 20  | 1 ... 25  | 1 ... 35  | [6]  |      | -...K2     |          |            |     |
| Shortened male thread          |      | Shortened male piston rod thread |           |           |           |      |      |            |          |            |     |
|                                | [mm] | 1 ... 4                          | 1 ... 8   | 1 ... 10  | [7]       |      |      | -...K6     |          |            |     |
| Female thread                  |      | Piston rod with female thread    |           |           |           |      |      |            |          |            |     |
|                                |      | -                                | -         | -         | -         | (M4) | (M6) | [8]        | -K3      |            |     |
| Custom thread                  |      | Custom piston rod thread         |           |           |           |      |      |            |          |            |     |
|                                |      | -                                | -         | -         | -         | -    | M10  |            | -“...”K5 |            |     |
| Extended piston rod at one end |      | Extended piston rod at one end   |           |           |           |      |      |            |          |            |     |
|                                | [mm] | 1 ... 50                         | 1 ... 100 | 1 ... 110 | 1 ... 150 |      |      | ...K8      |          |            |     |
| Clamping unit                  |      | Attached                         |           |           |           |      |      |            | -KP      |            | -KP |

[6] K2 Not with K3, K6

[7] K6 Not with K3

[8] K3 Not with K5

Ordering data – Modular product system

| Ordering table   |   |               |               |               |            |             |            |
|------------------|---|---------------|---------------|---------------|------------|-------------|------------|
| Size             | 32  | 40            | 50            | 63            | Conditions | Code        | Enter code |
| Module no.       | <b>193992</b>                                     | <b>193993</b> | <b>193994</b> | <b>193995</b> |            |             |            |
| Function         | Double-acting round cylinder                      |               |               |               |            | <b>DSNU</b> | DSNU       |
| Piston Ø [mm]    | 32  | 40            | 50            | 63            |            | -...        |            |
| Stroke [mm]      | 1 ... 500   |               |               |               | [1]        | -...        |            |
| Cushioning       | Elastic cushioning rings/plates at both ends      |               |               |               |            | <b>-P</b>   |            |
|                  | Pneumatic cushioning, adjustable at both ends     |               |               |               | [2]        | <b>-PPV</b> |            |
|                  | Pneumatic cushioning, self-adjusting at both ends |               |               |               | [3]        | <b>-PPS</b> |            |
| Position sensing | Via proximity switch                              |               |               |               | [4]        | <b>-A</b>   |            |
| Cylinder end cap | Lateral supply port, short end cap                |               |               |               | [5]        | <b>-MQ</b>  |            |
|                  | Axial supply port, short end cap                  |               |               |               | [5]        | <b>-MA</b>  |            |
| Piston rod type  | Through piston rod                                |               |               |               |            | <b>-S2</b>  |            |

- [1] -... Longer strokes on request
- [2] PPV Not with MA
- [3] PPS Not with MA, MH and not with combination MQ-R3
- [4] A Minimum stroke: 10 mm
- [5] MQ, MA Not with S2

## Ordering data – Modular product system

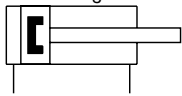
| Ordering table                 |      | 32                               | 40   | 50       | 63 | Conditions | Code     | Enter code |
|--------------------------------|------|----------------------------------|------|----------|----|------------|----------|------------|
| Extended male thread           |      | Extended male piston rod thread  |      |          |    |            |          |            |
|                                | [mm] | 1 ... 35                         |      | 1 ... 70 |    | [6]        | -...K2   |            |
| Shortened male thread          |      | Shortened male piston rod thread |      |          |    |            |          |            |
|                                | [mm] | 1 ... 8                          |      | 1 ... 10 |    | [7]        | -...K6   |            |
| Female thread                  |      | Piston rod with female thread    |      |          |    |            |          |            |
|                                |      | (M6)                             | (M8) | (M10)    |    | [8]        | -K3      |            |
| Custom thread                  |      | Custom piston rod thread         |      |          |    |            |          |            |
|                                |      | M10                              | M12  | M16      |    |            | -“...”K5 |            |
| Extended piston rod at one end |      | Extended piston rod at one end   |      |          |    |            |          |            |
|                                | [mm] | 1 ... 500                        |      |          |    |            | ...K8    |            |
| Clamping unit                  |      | Attached                         |      |          |    |            | -KP      | -KP        |

[6] K2 Not with K3, K6  
 [7] K6 Not with K3  
 [8] K3 Not with K5

# Round cylinders DSNU-Q, protected against rotation

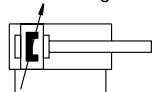
## Data sheet

### P cushioning

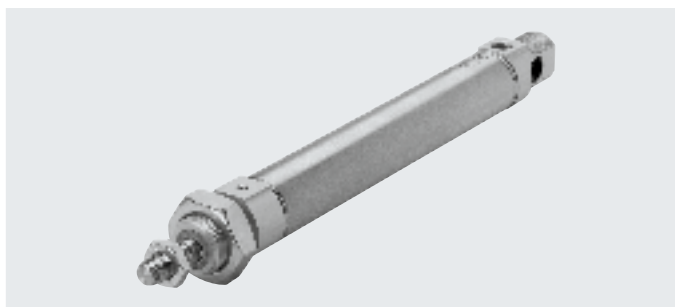


- - Diameter  
12 ... 25 mm  
ISO 6432

### PPV cushioning



- - Diameter  
32 ... 63 mm
- - Stroke length  
5 ... 500 mm



| General technical data        |      | 12   | 16   | 20        | 25        | 32        | 40        | 50      | 63        |
|-------------------------------|------|--|------|-----------|-----------|-----------|-----------|---------|-----------|
| Piston $\varnothing$          |      | 12   | 16   | 20        | 25        | 32        | 40        | 50      | 63        |
| Based on standard             |      | ISO 6432   |      |           |           | -         |           |         |           |
| Pneumatic connection          |      | M5   | M5   | G1/8      | G1/8      | G1/8      | G1/4      | G1/4    | G3/8      |
| Piston rod thread             |      | M6   | M6   | M8        | M10x1.25  | M10x1.25  | M12x1.25  | M16x1.5 | M16x1.5   |
| Stroke <sup>1)</sup>          | [mm] | 5 ... 160  |      | 5 ... 200 | 5 ... 250 | 5 ... 300 | 5 ... 400 |         | 5 ... 500 |
| Design                        |      | Piston<br>Protected against rotation with square piston rod  |      |           |           |           |           |         |           |
| Max. torque at the piston rod | [Nm] | 0.10   | 0.10 | 0.20      | 0.45      | 0.8       | 1.1       | 1.5     | 1.5       |
| Cushioning                    |      | DSNU-...-P<br>Elastic cushioning rings/plates at both ends   |      |           |           |           |           |         |           |
|                               |      | DSNU-...-PPV<br>Pneumatic cushioning adjustable at both ends |      |           |           |           |           |         |           |
| Cushioning length (PPV)       | [mm] | -  | 12   | 15        | 17        | 14        | 18        | 20      | 21        |
| Position sensing              |      | Via proximity switch   |      |           |           |           |           |         |           |
| Type of mounting              |      | With accessories   |      |           |           |           |           |         |           |
| Mounting position             |      | Any  |      |           |           |           |           |         |           |

- 1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.  
Longer strokes on request

| Operating and environmental conditions       |       | 12   | 16 | 20       | 25 | 32 | 40         | 50 | 63 |
|--|-------|--|----|----------|----|----|------------|----|----|
| 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) |    |          |    |    |            |    |    |
| Operating pressure                           | [bar] | 1.5 ... 10 <sup>1)</sup>   |    | 1 ... 10 |    |    |            |    |    |
| Ambient temperature <sup>2)</sup>            |       | DSNU-... [°C] -20 ... +80  |    |          |    |    |            |    |    |
|  |       | DSNU-Q-...-S6 [°C] -   |    |          |    |    | 0 ... +120 |    |    |
| Corrosion resistance class CRC <sup>3)</sup> |       | DSNU-... 2   |    |          |    |    |            |    |    |
|  |       | DSNU-Q-...-R3 3  |    |          |    |    |            |    |    |

- 1) For DSNU-12-...-Q-PPV (pneumatic cushioning adjustable at both ends): 2 ... 10 bar  
2) Note operating range of proximity switches  
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 which are in direct contact with a normal industrial environment.  
Corrosion resistance class CRC 3 to Festo standard FN 940070  
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

## Data sheet

| ATEX <sup>1)</sup>                         |   |
|--|---|
| ATEX category gas                          | II 2G                                       |
| Type of ignition protection for gas        | c T4  |
| ATEX category for dust                     | II 2D                                       |
| Type of ignition protection for dust       | c 120°C                                     |
| Explosion-proof ambient temperature        | -20°C ≤ Ta ≤ +60°C                          |
| CE marking (see declaration of conformity) | To EU Explosion Protection Directive (ATEX) |

1) Note the ATEX certification of the accessories.

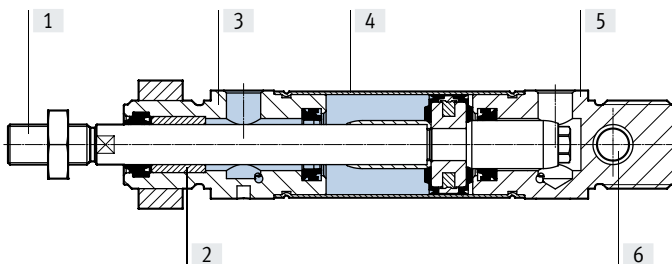
| Forces [N] and impact energy [J]                                  |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| Piston ø  | 12   | 16   | 20   | 25   | 32   | 40   | 50   | 63   |
| Theoretical force at 6 bar, advancing                             | 68   | 121  | 189  | 295  | 483  | 753  | 1178 | 1870 |
| Theoretical force at 6 bar, retracting                            | 51   | 104  | 158  | 247  | 415  | 633  | 990  | 1682 |
| Impact energy in the end positions for P cushioning <sup>1)</sup> | 0.07 | 0.15 | 0.20 | 0.30 | 0.40 | 0.70 | 1    | 1.3  |

1) The values are reduced by approx. 50% at an ambient temperature of 80°C

| Weight [g]                         |      |     |     |      |       |     |      |      |
|------------------------------------|------|-----|-----|------|-------|-----|------|------|
| Piston ø                           | 12   | 16  | 20  | 25   | 32    | 40  | 50   | 63   |
| Product weight with 0 mm stroke    | 80   | 110 | 215 | 275  | 370.5 | 661 | 1087 | 1445 |
| Additional weight per 10 mm stroke | 4.1  | 4.7 | 7.1 | 10.9 | 15.5  | 24  | 40   | 44   |
| Moving mass with 0 mm stroke       | 18.5 | 23  | 44  | 71   | 121   | 230 | 413  | 459  |
| Moving mass per 10 mm stroke       | 2    | 2   | 4   | 6    | 9     | 16  | 25   | 25   |

## Materials

## Sectional view



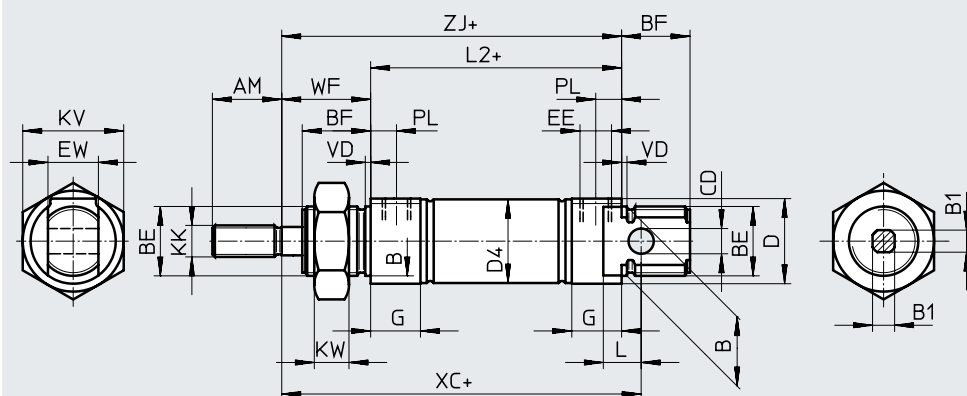
| Round cylinder         |                            |
|------------------------|----------------------------|
| [1] Piston rod         |                            |
| DSNU-...               | High-alloy steel           |
| DSNU-...-R3            | High-alloy stainless steel |
| [2] Piston rod bearing | Sintered bronze            |
| [3] Bearing cap        | Anodised aluminium         |
| [4] Cylinder barrel    | High-alloy stainless steel |
| [5] End cap            | Anodised aluminium         |
| - Seals                | TPE-U(PU), NBR             |
| Note on materials      | RoHS-compliant             |
| [6] Swivel bearing     | Polymer                    |

Data sheet

Dimensions

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

DSNU-12 ... 25

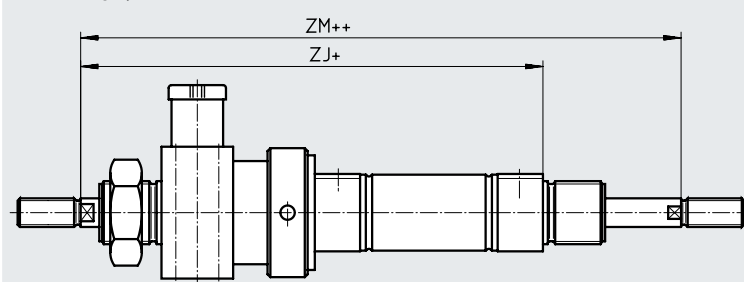


**Note**  
 Piston rod nut is not included in the scope of delivery for diameter 12 ... 20.  
 + = plus stroke length

| ∅<br>[mm] | AM | B<br>∅<br>h9 | B1<br>j | BE      | BF | CD<br>∅<br>H9 | D<br>∅ | D4<br>∅ | EE   | EW |
|-----------|----|--------------|---------|---------|----|---------------|--------|---------|------|----|
| 12        | 16 | 16           | 5.5     | M16x1.5 | 17 | 6             | 20     | 13.3    | M5   | 12 |
| 16        |    |              |         |         |    |               |        | 17.3    |      |    |
| 20        | 20 | 22           | 7       | M22x1.5 | 20 | 8             | 27     | 21.3    | G1/8 | 16 |
| 25        | 22 |              | 9       |         | 22 |               |        | 26.5    |      |    |

| ∅<br>[mm] | G  | KK       | KV | KW | L  | L2   | PL  | VD | WF | XC<br>±1 | ZJ  |
|-----------|----|----------|----|----|----|------|-----|----|----|----------|-----|
| 12        | 10 | M6       | 24 | 8  | 9  | 50   | 6   | 2  | 22 | 75       | 72  |
| 16        |    |          |    |    |    | 56   |     |    |    | 82       | 78  |
| 20        | 16 | M8       | 32 | 11 | 12 | 68   | 8.2 |    | 24 | 95       | 92  |
| 25        |    | M10x1.25 |    |    |    | 69.5 |     |    |    | 28       | 104 |

S2 – Through piston rod



**Note**  
 The thread types at both piston rod ends are identical. The clamping unit is mounted at only one end. In combination with variant Q, the right piston rod is square, the left piston rod round. The clamping unit is mounted on the left-hand, round piston rod.  
 + = plus stroke length  
 ++ = plus 2x stroke length

| ∅<br>[mm] | ZJ    | ZM    |
|-----------|-------|-------|
| 12        | 110   | 132   |
| 16        | 116   | 138   |
| 20        | 139   | 163   |
| 25        | 145.5 | 173.5 |

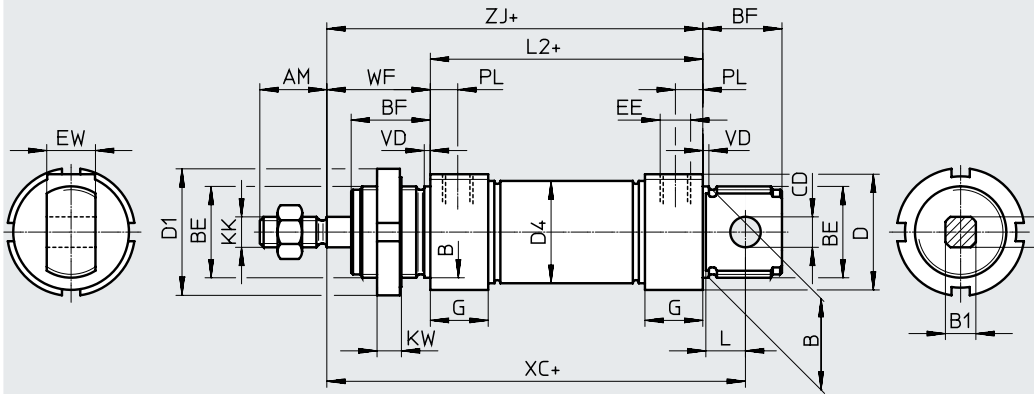


Data sheet

Dimensions

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

DSNU-32 ... 63

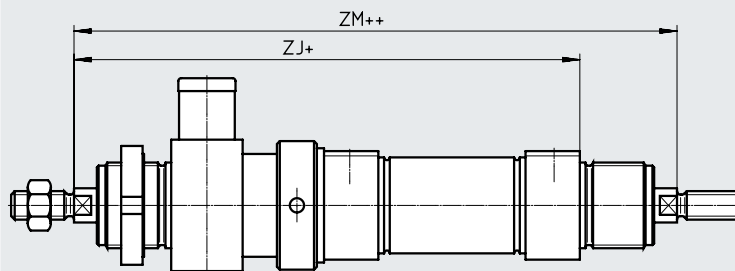


+ = plus stroke length

| ∅  | AM | B<br>∅<br>h9 | B1<br>j | BE      | BF | CD<br>∅<br>E10 | D<br>∅ | D1<br>∅ | D4<br>∅ | EE   | EW |
|----|----|--------------|---------|---------|----|----------------|--------|---------|---------|------|----|
| 32 | 22 | 30           | 10      | M30x1.5 | 26 | 10             | 38     | 42      | 33.6    | G1/8 | 16 |
| 40 | 24 | 38           | 12      | M38x1.5 | 30 | 12             | 46     | 50      | 41.6    | G1/4 | 18 |
| 50 | 32 | 45           | 16      | M45x1.5 | 33 | 16             | 57     | 60      | 52.4    | G1/4 | 21 |
| 63 | 32 | 45           | 16      | M45x1.5 | 33 | 16             | 70     | 60      | 65.4    | G3/8 | 21 |

| ∅  | G  | KK       | KW | L  | L2   | PL | VD | WF | XC<br>±1 | ZJ    |
|----|----|----------|----|----|------|----|----|----|----------|-------|
| 32 | 19 | M10x1.25 | 8  | 13 | 69.5 | 9  | 2  | 34 | 117.5    | 103.5 |
| 40 | 25 | M12x1.25 | 10 | 15 | 84.6 | 12 | 3  | 39 | 139.6    | 123.6 |
| 50 | 25 | M16x1.5  | 10 | 16 | 86.2 | 12 | 3  | 44 | 147.2    | 130.2 |
| 63 | 28 | M16x1.5  | 10 | 16 | 94.2 | 13 | 3  | 45 | 156.2    | 139.2 |

S2 – Through piston rod



Note

The thread types at both piston rod ends are identical. The clamping unit is mounted at only one end. In combination with variant Q, the right piston rod is square, the left piston rod round. The clamping unit is mounted on the left-hand, round piston rod.


+ = plus stroke length  
++ = plus 2x stroke length

| ∅  | ZJ    | ZM    |
|----|-------|-------|
| 32 | 159   | 191   |
| 40 | 194.1 | 230.1 |
| 50 | 209.7 | 250.7 |
| 63 | 226.7 | 268.7 |

## Ordering data – Modular product system

| Ordering table              |  |  |               |               |            |        |            |
|-----------------------------|--|--|---------------|---------------|------------|--------|------------|
| Size                        | 12   | 16   | 20            | 25            | Conditions | Code   | Enter code |
| Module no.                  | <b>193988</b>                                    | <b>193989</b>  | <b>193990</b> | <b>193991</b> |            |        |            |
| Function                    | Round cylinder, double-acting, based on ISO 6432 |  |               |               |            |        | DSNU       |
| Piston Ø [mm]               | 12   | 16   | 20            | 25            |            | ★ -... |            |
| Stroke [mm]                 | 5 ... 160  |  | 5 ... 200     | 5 ... 250     | [1]        | ★ -... |            |
| Cushioning                  | Elastic cushioning rings/plates at both ends     | -  | -             | -             |            | ★ -P   |            |
|                             | -  | Pneumatic cushioning, adjustable at both ends                |               |               | [2]        | ★ -PPV |            |
| Position sensing            | Via proximity switch                             |  |               |               | [3]        | ★ -A   |            |
| Cylinder end cap            | Lateral supply port, short end cap               |  |               |               | [4]        | ★ -MQ  |            |
|                             | Axial supply port, short end cap                 | -  | -             | -             | [4]        | -MA    |            |
|                             | -  | With mounting flange at front (direct mounting), bearing cap |               |               | [5]        | -MH    |            |
| Protection against rotation | Square piston rod                                |  |               |               |            | ★ -Q   | -Q         |
| Piston rod type             | Through piston rod                               |  |               |               |            | ★ -S2  |            |

- [1] -... Longer strokes on request
- [2] PPV Not with MA
- [3] A Minimum stroke: 10 mm
- [4] MQ, MA Not with S2
- [5] MH Not with combination Q-R3

 **Note**

The bellows kit DADB must not be used in combination with the variant Q.

## Ordering data – Modular product system


| Ordering table                 |                                  |           |                           |           |            |          |            |
|--------------------------------|----------------------------------|-----------|---------------------------|-----------|------------|----------|------------|
| Size                           | 12                               | 16        | 20                        | 25        | Conditions | Code     | Enter code |
| Extended male thread           | Extended male piston rod thread  |           |                           |           |            |          |            |
|                                | [mm]                             | 1 ... 20  | 1 ... 25                  | 1 ... 35  | [6]        | -...K2   |            |
| Shortened male thread          | Shortened male piston rod thread |           |                           |           |            |          |            |
|                                | [mm]                             | 1 ... 4   | 1 ... 8                   | 1 ... 10  | [7]        | -...K6   |            |
| Female thread                  | Piston rod with female thread    |           |                           |           |            |          |            |
|                                | -                                | -         | (M4)                      | (M6)      | [8]        | ★ -K3    |            |
| Custom thread                  | Custom piston rod thread         |           |                           |           |            |          |            |
|                                | -                                | -         | -                         | M10       |            | -“...”K5 |            |
| Extended piston rod at one end | Extended piston rod at one end   |           |                           |           |            |          |            |
|                                | [mm]                             | 1 ... 100 | 1 ... 110                 | 1 ... 150 |            | ★ ...K8  |            |
| Clamping unit                  | Attached                         |           |                           |           | [9]        | -KP      |            |
| Corrosion protection           | -                                |           | High corrosion protection |           |            | ★ -R3    |            |
| EU certification               | II 2GD                           |           |                           |           | [10]       | -EX4     |            |

- [6] K2 Not with K3, K6  
 [7] K6 Not with K3  
 [8] K3 Not with K5  
 [9] KP Only with S2. Not with R3  
 [10] EX4 Not with KP

## Ordering data – Modular product system

| Ordering table              |   |               |               |               |            |             |            |
|-----------------------------|---|---------------|---------------|---------------|------------|-------------|------------|
| Size                        | 32  | 40            | 50            | 63            | Conditions | Code        | Enter code |
| Module no.                  | <b>193992</b>   | <b>193993</b> | <b>193994</b> | <b>193995</b> |            |             |            |
| Function                    | Double-acting round cylinder                            |               |               |               |            | <b>DSNU</b> | DSNU       |
| Piston Ø [mm]               | 32  | 40            | 50            | 63            |            | ★ -...      |            |
| Stroke [mm]                 | 5 ... 300   | 5 ... 400     |               | 5 ... 500     | [1]        | ★ -...      |            |
| Cushioning                  | Elastic cushioning rings/plates at both ends            |               |               |               |            | ★ -P        |            |
|                             | Pneumatic cushioning adjustable at both ends            |               |               |               | [2]        | ★ -PPV      |            |
| Position sensing            | Via proximity switch                                    |               |               |               | [3]        | ★ -A        |            |
| Cylinder end cap            | Lateral supply port, short end cap                      |               |               |               | [4]        | ★ -MQ       |            |
|                             | Axial supply port, short end cap                        |               |               |               | [4]        | -MA         |            |
|                             | Mounting flange at front (direct mounting), bearing cap |               |               |               | [5]        | -MH         |            |
| Protection against rotation | Square piston rod                                       |               |               |               |            | ★ -Q        | -Q         |
| Piston rod type             | Through piston rod                                      |               |               |               |            | ★ -S2       |            |

- [1] -... Longer strokes on request  
 [2] PPV Not with MA  
 [3] A Minimum stroke: 10 mm  
 [4] MQ, MA Not with S2  
 [5] MH Not with combinations: Q-R3, S6-R3. Not with KP

 - **Note**

The bellows kit DADB must not be used in combination with the variant Q.

## Ordering data – Modular product system

| Ordering table                 |      | 32                               | 40   | 50       | 63 | Conditions | Code     | Enter code |
|--------------------------------|------|----------------------------------|------|----------|----|------------|----------|------------|
| Extended male thread           |      | Extended male piston rod thread  |      |          |    |            |          |            |
|                                | [mm] | 1 ... 35                         |      | 1 ... 70 |    | [6]        | -...K2   |            |
| Shortened male thread          |      | Shortened male piston rod thread |      |          |    |            |          |            |
|                                | [mm] | 1 ... 8                          |      | 1 ... 10 |    | [7]        | -...K6   |            |
| Female thread                  |      | Piston rod with female thread    |      |          |    |            |          |            |
|                                |      | (M6)                             | (M8) | (M10)    |    | [8]        | ★ -K3    |            |
| Custom thread                  |      | Custom piston rod thread         |      |          |    |            |          |            |
|                                |      | M10                              | M12  | M16      |    |            | -“...”K5 |            |
| Extended piston rod at one end |      | Extended piston rod at one end   |      |          |    |            |          |            |
|                                | [mm] | 1 ... 500                        |      |          |    |            | ★ ...K8  |            |
| Clamping unit                  |      | Attached                         |      |          |    | [9]        | -KP      |            |
| Temperature resistance         |      | Heat-resistant seals max. 120°C  |      |          |    |            | ★ -S6    |            |
| Corrosion protection           |      | High corrosion protection        |      |          |    |            | ★ -R3    |            |
| EU certification               |      | II 2GD                           |      |          |    | [10]       | -EX4     |            |

|      |     |                               |
|------|-----|-------------------------------|
| [6]  | K2  | Not with K3, K6               |
| [7]  | K6  | Not with K                    |
| [8]  | K3  | Not with K5                   |
| [9]  | KP  | Only with S2. Not with S6, R3 |
| [10] | EX4 | Not with KP, S6               |

## Accessories

### Foot mounting HBN/CRHBN

Scope of delivery:

HBN/CRHBN-...x1: 1 foot

HBN/CRHBN-...x2: 2 feet and 1 nut

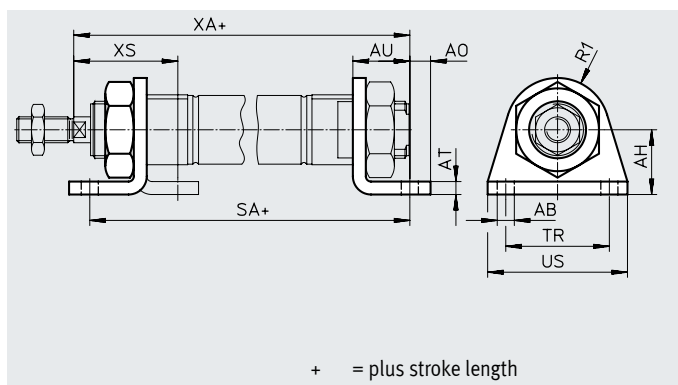
Material:

HBN: Galvanised steel

CRHBN: High-alloy stainless steel

Free of copper and PTFE

RoHS-compliant



#### Dimensions and ordering data

| For $\varnothing$<br>[mm] | AB<br>$\varnothing$ | AH | AO | AT | AU | R1 | SA      |       | TR | US | XA      |         | XS |   |
|---------------------------|---------------------|----|----|----|----|----|---------|-------|----|----|---------|---------|----|---|
|                           |                     |    |    |    |    |    | DSNU-KP |       |    |    | DSNU-KP | DSNU-KP |    |   |
| 8, 10                     | 4.5                 | 16 | 5  | 3  | 11 | 10 | 68      | 97    | 25 | 35 | 73      | 102     | 24 | - |
| 12                        | 5.5                 | 20 | 6  | 4  | 14 | 13 | 78      | 116   | 32 | 42 | 86      | 124     | 32 | - |
| 16                        | 5.5                 | 20 | 6  | 4  | 14 | 13 | 84      | 122   | 32 | 42 | 92      | 130     | 32 | - |
| 20                        | 6.6                 | 25 | 8  | 5  | 17 | 20 | 102     | 149   | 40 | 54 | 109     | 156     | 36 | - |
| 25                        | 6.6                 | 25 | 8  | 5  | 17 | 20 | 103.5   | 151.5 | 40 | 54 | 114.5   | 162.5   | 40 | - |

| For $\varnothing$<br>[mm] | Basic version     |            |          |             | High corrosion protection |            |          |               |
|---------------------------|-------------------|------------|----------|-------------|---------------------------|------------|----------|---------------|
|                           | CRC <sup>1)</sup> | Weight [g] | Part no. | Type        | CRC <sup>1)</sup>         | Weight [g] | Part no. | Type          |
| 8, 10                     | 1                 | 22         | 5123     | HBN-8/10X1  | -                         | -          | -        |               |
|                           | 1                 | 54         | 5124     | HBN-8/10X2  | -                         | -          | -        |               |
| 12, 16                    | 1                 | 43         | ★ 5125   | HBN-12/16X1 | 4                         | 43         | 161866   | CRHBN-12/16x1 |
|                           | 1                 | 107        | ★ 5126   | HBN-12/16X2 | 4                         | 107        | 162999   | CRHBN-12/16x2 |
| 20, 25                    | 1                 | 95         | ★ 5127   | HBN-20/25X1 | 4                         | 94         | 161867   | CRHBN-20/25x1 |
|                           | 1                 | 237        | ★ 5128   | HBN-20/25X2 | 4                         | 236        | 162998   | CRHBN-20/25x2 |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

2) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

## Accessories

### Foot mounting HBN/CRH

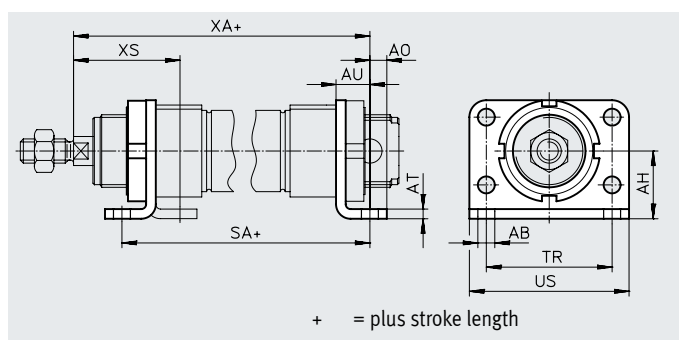
Material:

HBN: Galvanised steel

CRH: High-alloy stainless steel

Free of copper and PTFE

RoHS-compliant



### Dimensions and ordering data

| For $\varnothing$<br>[mm] | AB<br>$\varnothing$ | AH | AO | AT | AU | SA    |         | TR | US | XA    |         | XS |         |
|---------------------------|---------------------|----|----|----|----|-------|---------|----|----|-------|---------|----|---------|
|                           |                     |    |    |    |    |       | DSNU-KP |    |    |       | DSNU-KP |    | DSNU-KP |
| 32                        | 7                   | 28 | 7  | 4  | 14 | 97.5  | 151     | 52 | 66 | 117.5 | 171     | 44 | -       |
| 40                        | 9                   | 33 | 10 | 5  | 20 | 124.6 | 192.1   | 60 | 80 | 138.6 | 206.1   | 49 | -       |
| 50                        | 9                   | 40 | 10 | 6  | 20 | 126.2 | 202.7   | 70 | 90 | 150.2 | 226.7   | 58 | -       |
| 63                        | 9                   | 45 | 10 | 6  | 20 | 134.2 | 218.7   | 76 | 96 | 159.2 | 243.7   | 59 | -       |

| For $\varnothing$<br>[mm] | Basic version     |            |          |          | High corrosion protection |            |          |        |
|---------------------------|-------------------|------------|----------|----------|---------------------------|------------|----------|--------|
|                           | CRC <sup>1)</sup> | Weight [g] | Part no. | Type     | CRC <sup>1)</sup>         | Weight [g] | Part no. | Type   |
| 32                        | 1                 | 353        | 195851   | HBN-32x2 | 4                         | 353        | 162951   | CRH-32 |
| 40                        | 1                 | 611        | 195852   | HBN-40x2 | 4                         | 611        | 162952   | CRH-40 |
| 50                        | 1                 | 916        | 195853   | HBN-50x2 | 4                         | 916        | 162953   | CRH-50 |
| 63                        | 1                 | 1066       | 195854   | HBN-63x2 | 4                         | 1066       | 162954   | CRH-63 |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

## Accessories

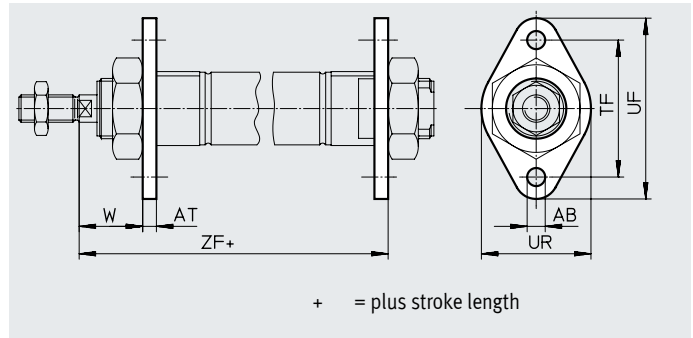
### Flange mounting FBN/CRFBN

Material:

FBN: Galvanised steel

CRFBN: High-alloy stainless steel

Free of copper and PTFE



#### Dimensions and ordering data

| For $\varnothing$<br>[mm] | AB<br>$\varnothing$ | AT | TF | UF | UR | W  | ZF    |         |
|---------------------------|---------------------|----|----|----|----|----|-------|---------|
|                           |                     |    |    |    |    |    |       | DSNU-KP |
| 8, 10                     | 4.5                 | 3  | 30 | 40 | 25 | 13 | 65    | 94      |
| 12                        | 5.5                 | 4  | 40 | 53 | 30 | 18 | 76    | 114     |
| 16                        | 5.5                 | 4  | 40 | 53 | 30 | 18 | 82    | 120     |
| 20                        | 6.6                 | 5  | 50 | 66 | 40 | 19 | 97    | 144     |
| 25                        | 6.6                 | 5  | 50 | 66 | 40 | 23 | 102.5 | 150.5   |

| For $\varnothing$<br>[mm] | Basic version     |            |             | High corrosion protection |                   |            |               |                    |
|---------------------------|-------------------|------------|-------------|---------------------------|-------------------|------------|---------------|--------------------|
|                           | CRC <sup>1)</sup> | Weight [g] | Part no.    | Type                      | CRC <sup>1)</sup> | Weight [g] | Part no.      | Type               |
| 8, 10                     | 1                 | 12         | <b>5129</b> | <b>FBN-8/10</b>           | –                 | –          | –             | –                  |
| 12, 16                    | 1                 | 26         | <b>5130</b> | <b>FBN-12/16</b>          | 4                 | 26         | <b>161864</b> | <b>CRFBN-12/16</b> |
| 20, 25                    | 1                 | 52         | <b>5131</b> | <b>FBN-20/25</b>          | 4                 | 52         | <b>161865</b> | <b>CRFBN-20/25</b> |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.



## Accessories

## Flange mounting FBN/CRFV

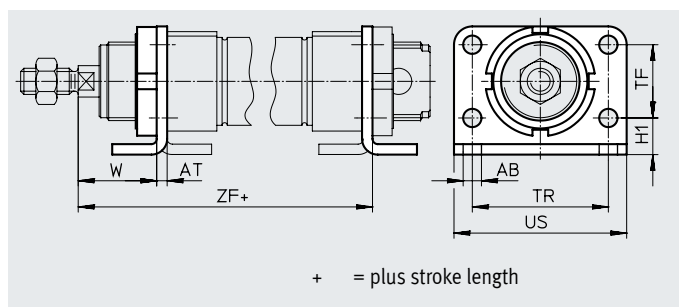
Material:

FBN: Galvanised steel

CRFV: High-alloy stainless steel

Free of copper and PTFE

RoHS-compliant



## Dimensions and ordering data

| For $\varnothing$<br>[mm] | AB<br>$\varnothing$ | AT | H1 | TF | TR | US | W  | ZF    |         |
|---------------------------|---------------------|----|----|----|----|----|----|-------|---------|
|                           |                     |    |    |    |    |    |    |       | DSNU-KP |
| 32                        | 7                   | 4  | 14 | 28 | 52 | 66 | 30 | 107.5 | 161     |
| 40                        | 9                   | 5  | 18 | 30 | 60 | 80 | 29 | 123.6 | 191.1   |
| 50                        | 9                   | 6  | 20 | 40 | 70 | 90 | 38 | 136.2 | 212.6   |
| 63                        | 9                   | 6  | 20 | 50 | 76 | 96 | 39 | 145.2 | 229.7   |

| For $\varnothing$<br>[mm] | Basic version     |            |               |               | High corrosion protection |            |               |                |
|---------------------------|-------------------|------------|---------------|---------------|---------------------------|------------|---------------|----------------|
|                           | CRC <sup>1)</sup> | Weight [g] | Part no.      | Type          | CRC <sup>1)</sup>         | Weight [g] | Part no.      | Type           |
| 32                        | 1                 | 103        | <b>195855</b> | <b>FBN-32</b> | 4                         | 103        | <b>161858</b> | <b>CRFV-32</b> |
| 40                        | 1                 | 191        | <b>195856</b> | <b>FBN-40</b> | 4                         | 191        | <b>161859</b> | <b>CRFV-40</b> |
| 50                        | 1                 | 292        | <b>195857</b> | <b>FBN-50</b> | 4                         | 292        | <b>161860</b> | <b>CRFV-50</b> |
| 63                        | 1                 | 367        | <b>195858</b> | <b>FBN-63</b> | 4                         | 367        | <b>161861</b> | <b>CRFV-63</b> |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

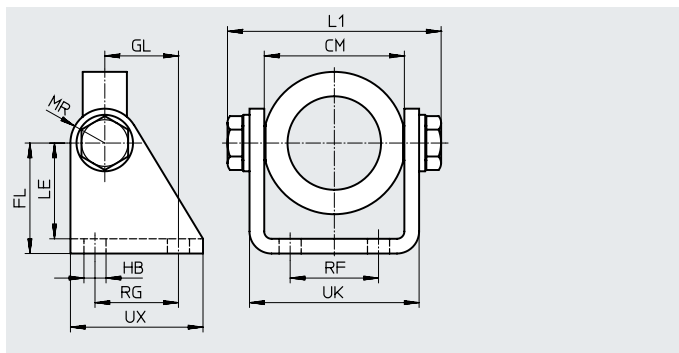
Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

## Accessories

### Swivel mounting SBN

Material:  
 Retaining ring: Anodised wrought aluminium alloy  
 Bearing: Bronze  
 Screws: Galvanised steel  
 Bracket: Steel  
 Cannot be used on the bearing cap in combination with bellows kit DADB.



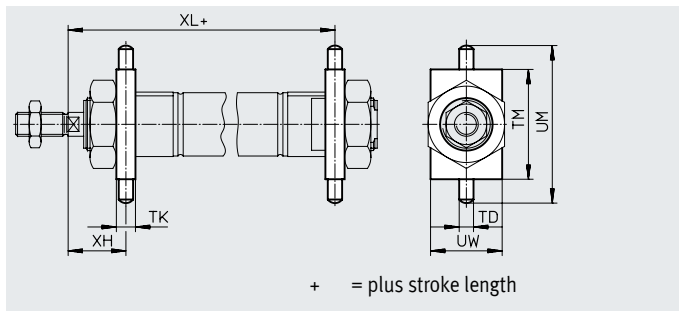
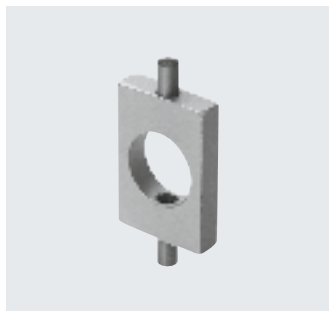
#### Dimensions and ordering data

| For $\varnothing$<br>[mm] | CM       | FL | GL | HB | L1<br>max. | LE | MR | RF | RG | UK   | UX | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type      |
|---------------------------|----------|----|----|----|------------|----|----|----|----|------|----|-------------------|---------------|----------|-----------|
| 20/25                     | 38.1+0.4 | 35 | 20 | 7  | 60.2       | 31 | 12 | 20 | 24 | 46.1 | 40 | 1                 | 238           | 539927   | SBN-20/25 |
| 32                        | 46.1+0.2 | 40 | 27 | 9  | 72.2       | 35 | 13 | 28 | 30 | 56.1 | 50 | 1                 | 361           | 539924   | SBN-32    |
| 40                        | 57.1+0.2 | 45 | 30 | 9  | 88.2       | 39 | 14 | 36 | 34 | 69.1 | 54 | 1                 | 593           | 539925   | SBN-40    |
| 50/63                     | 70.1+0.4 | 50 | 34 | 9  | 102.2      | 44 | 16 | 42 | 35 | 82.1 | 65 | 1                 | 894           | 539926   | SBN-50/63 |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070  
 Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

### Swivel mounting WBN

Material:  
 Galvanised steel  
 Free of copper and PTFE  
 RoHS-compliant  
 Cannot be used on the bearing cap in combination with bellows kit DADB.



#### Dimensions and ordering data

| For $\varnothing$<br>[mm] | TD<br>$\varnothing$<br>-0.01/<br>-0.05 | TK | TM | UM  | UW | XH   | XL    |         | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type      |
|---------------------------|--|----|----|-----|----|------|-------|---------|-------------------|---------------|----------|-----------|
|                           |  |    |    |     |    |      |       | DSNU-KP |                   |               |          |           |
| 8, 10                     | 4                                      | 6  | 26 | 38  | 20 | 13   | 65    | 94      | 1                 | 20            | 8608     | WBN-8/10  |
| 12                        | 6                                      | 8  | 38 | 58  | 25 | 18   | 76    | 114     | 1                 | 51            | 8609     | WBN-12/16 |
| 16                        | 6                                      | 8  | 38 | 58  | 25 | 18   | 82    | 120     | 1                 | 51            | 8609     | WBN-12/16 |
| 20                        | 6                                      | 8  | 46 | 66  | 30 | 20   | 96    | 143     | 1                 | 67            | 8610     | WBN-20/25 |
| 25                        | 6                                      | 8  | 46 | 66  | 30 | 24   | 101.5 | 149.5   | 1                 | 67            | 8610     | WBN-20/25 |
| 32                        | 8                                      | 12 | 50 | 76  | 40 | 28   | 109.5 | 163     | 1                 | 131           | 195863   | WBN-32    |
| 40                        | 10                                     | 15 | 60 | 92  | 50 | 31.5 | 126.1 | 193.6   | 1                 | 238           | 195864   | WBN-40    |
| 50                        | 12                                     | 20 | 80 | 116 | 65 | 34   | 140.2 | 216.7   | 1                 | 596           | 195865   | WBN-50/63 |
| 63                        | 12                                     | 20 | 80 | 116 | 65 | 35   | 149.2 | 233.7   | 1                 | 596           | 195865   | WBN-50/63 |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070  
 Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

## Accessories

## Clevis foot LBN/CRLBN

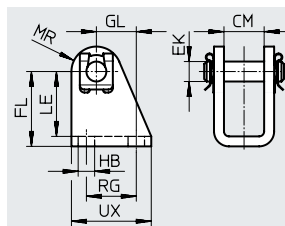
Material:

LBN: Galvanised steel

CRLBN: High-alloy stainless steel

Free of copper and PTFE

RoHS-compliant



## Dimensions and ordering data

| For $\varnothing$<br>[mm] | CM   | EK<br>$\varnothing$ | FL           | GL   | HB  | LE   | MR | RG   | UX |
|---------------------------|------|---------------------|--------------|------|-----|------|----|------|----|
| 8, 10                     | 8.1  | 4                   | 24 +0.3/-0.2 | 13.8 | 4.5 | 21.5 | 5  | 12.5 | 20 |
| 12, 16                    | 12.1 | 6                   | 27 +0.3/-0.2 | 13   | 5.5 | 24   | 7  | 15   | 25 |
| 20, 25                    | 16.1 | 8                   | 30 +0.4/-0.2 | 16   | 6.6 | 26   | 10 | 20   | 32 |
| 32                        | 16.1 | 10                  | 35 +0.4/-0.2 | 18.5 | 6.6 | 31   | 11 | 24   | 35 |
| 40                        | 18.1 | 12                  | 40 +0.4/-0.2 | 24.5 | 9   | 35   | 13 | 30   | 45 |
| 50, 63                    | 21.1 | 16                  | 45 +0.5/-0.2 | 28   | 9   | 39   | 14 | 34   | 50 |

| For $\varnothing$<br>[mm] | Basic version     |            |               |                  | High corrosion protection |            |               |                    |
|---------------------------|-------------------|------------|---------------|------------------|---------------------------|------------|---------------|--------------------|
|                           | CRC <sup>1)</sup> | Weight [g] | Part no.      | Type             | CRC <sup>1)</sup>         | Weight [g] | Part no.      | Type               |
| 8, 10                     | 1                 | 20         | <b>6057</b>   | <b>LBN-8/10</b>  | -                         | -          | -             |                    |
| 12, 16                    | 1                 | 40         | ★ <b>6058</b> | <b>LBN-12/16</b> | 4                         | 39         | <b>161862</b> | <b>CRLBN-12/16</b> |
| 20, 25                    | 1                 | 84         | ★ <b>6059</b> | <b>LBN-20/25</b> | 4                         | 82         | <b>161863</b> | <b>CRLBN-20/25</b> |
| 32                        | 1                 | 110        | <b>195860</b> | <b>LBN-32</b>    | 4                         | 106        | <b>195866</b> | <b>CRLBN-32</b>    |
| 40                        | 1                 | 191        | <b>195861</b> | <b>LBN-40</b>    | 4                         | 185        | <b>195867</b> | <b>CRLBN-40</b>    |
| 50, 63                    | 1                 | 300        | <b>195862</b> | <b>LBN-50/63</b> | 4                         | 283        | <b>195868</b> | <b>CRLBN-50/63</b> |


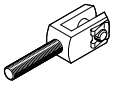
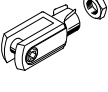
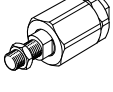
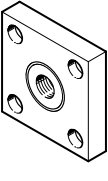
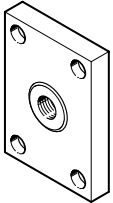

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).


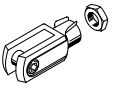
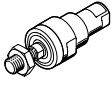
Corrosion resistance class CRC 4 to Festo standard FN 940070



Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

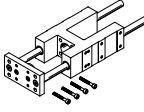
Accessories

| Ordering data – Piston rod attachments   |       |          |              | Data sheets → Internet: piston rod attachment                                       |       |          |              |
|--|-------|----------|--------------|---|-------|----------|--------------|
| Designation  | For ø | Part no. | Type         | Designation   | For ø | Part no. | Type         |
| <b>Rod eye SGS</b>   |       |          |              | <b>Rod clevis SGA</b>   |       |          |              |
|    | 8     | 9253     | SGS-M4       |    | 8     | -        |              |
|  | 10    |          |              |   | 10    |          |              |
|  | 12    | ★ 9254   | SGS-M6       |   | 12    |          |              |
|  | 16    |          |              |   | 16    |          |              |
|  | 20    | ★ 9255   | SGS-M8       |   | 20    |          |              |
|  | 25    | ★ 9261   | SGS-M10x1.25 |   | 25    |          |              |
|  | 32    |          |              |   | 32    | 32954    | SGA-M10x1.25 |
|  | 40    | ★ 9262   | SGS-M12x1.25 |   | 40    | 10767    | SGA-M12x1.25 |
|  | 50    | ★ 9263   | SGS-M16x1.5  |   | 50    | 10768    | SGA-M16x1.5  |
| 63   |       |          | 63           |   |       |          |              |
| <b>Rod clevis SG</b>   |       |          |              | <b>Self-aligning rod coupler FK</b>   |       |          |              |
|    | 8     | 6532     | SG-M4        |    | 8     | 6528     | FK-M4        |
|  | 10    |          |              |   | 10    |          |              |
|  | 12    | ★ 3110   | SG-M6        |   | 12    | ★ 2061   | FK-M6        |
|  | 16    |          |              |   | 16    |          |              |
|  | 20    | ★ 3111   | SG-M8        |   | 20    | ★ 2062   | FK-M8        |
|  | 25    | ★ 6144   | SG-M10x1.25  |   | 25    | ★ 6140   | FK-M10x1.25  |
|  | 32    |          |              |   | 32    |          |              |
|  | 40    | ★ 6145   | SG-M12x1.25  |   | 40    | ★ 6141   | FK-M12x1.25  |
|  | 50    | ★ 6146   | SG-M16x1.5   |   | 50    | ★ 6142   | FK-M16x1.5   |
| 63   |       |          | 63           |   |       |          |              |
| <b>Coupling piece KSG</b>  |       |          |              | <b>Coupling piece KSZ</b>   |       |          |              |
|  | 12    | -        |              |  | 12    | 36123    | KSZ-M6       |
|  | 16    |          |              |   | 16    |          |              |
|  | 20    |          |              |   | 20    | 36124    | KSZ-M8       |
|  | 25    | 32963    | KSG-M10x1.25 |   | 25    | 36125    | KSZ-M10x1.25 |
|  | 32    |          |              |   | 32    |          |              |
|  | 40    | 32964    | KSG-M12x1.25 |   | 40    | 36126    | KSZ-M12x1.25 |
|  | 50    | 32965    | KSG-M16x1.5  |   | 50    | 36127    | KSZ-M16x1.5  |
| 63   |       |          | 63           |   |       |          |              |
| <b>Hex nut MSK</b>   |       |          |              |   |       |          |              |
|  | 16    | 189007   | MSK-M16X1.5  |   |       |          |              |
|  | 20    | ★ 189009 | MSK-M22X1.5  |   |       |          |              |
|  | 25    |          |              |   |       |          |              |

## Accessories

| Ordering data – Piston-rod attachments, corrosion-resistant                       |       |          |                | Data sheets → Internet: piston rod attachment                                     |       |          |               |
|---|-------|----------|----------------|---|-------|----------|---------------|
| Designation   | For ø | Part no. | Type           | Designation   | For ø | Part no. | Type          |
| <b>Rod eye CRSGS</b>  |       |          |                | <b>Rod clevis CRSG</b>  |       |          |               |
|  | 12    | 195580   | CRSGS-M6       |  | 12    | 13567    | CRSG-M6       |
|   | 16    |          |                |   | 16    |          |               |
|   | 20    | 195581   | CRSGS-M8       |   | 20    | 13568    | CRSG-M8       |
|   | 25    | 195582   | CRSGS-M10x1.25 |   | 25    | 13569    | CRSG-M10x1.25 |
|   | 32    |          |                |   | 32    |          |               |
|   | 40    | 195583   | CRSGS-M12x1.25 |   | 40    | 13570    | CRSG-M12x1.25 |
|   | 50    | 195584   | CRSGS-M16x1.5  |   | 50    | 13571    | CRSG-M16x1.5  |
| 63  |       |          | 63             |   |       |          |               |
| <b>Self-aligning rod coupler CRFK</b>   |       |          |                |   |       |          |               |
|  | 25    | 2305778  | CRFK-M10x1.25  |   |       |          |               |
|   | 32    |          |                |   |       |          |               |
|   | 40    | 2305779  | CRFK-M12x1.25  |   |       |          |               |
|   | 50    | 2490673  | CRFK-M16x1.5   |   |       |          |               |
|   | 63    |          |                |   |       |          |               |

| Ordering data – Mounting components   |       |          |        | Data sheets → Internet: clevis foot   |       |          |        |
|---|-------|----------|--------|---|-------|----------|--------|
| Designation   | For ø | Part no. | Type   | Designation   | For ø | Part no. | Type   |
| <b>Clevis foot LBG</b>  |       |          |        | <b>Right angle clevis foot LQG</b>  |       |          |        |
|  | 32    | 31761    | LBG-32 |  | 32    | 31768    | LQG-32 |
|   | 40    | 31762    | LBG-40 |   | 40    | 31769    | LQG-40 |
|   | 50    | 31763    | LBG-50 |   | 50    | 31770    | LQG-50 |
|   | 63    | 31764    | LBG-63 |   | 63    | 31771    | LQG-63 |

| Ordering data – Guide units   |        |             |                                       |                  | Data sheets → Internet: feng |                  |
|---|--------|-------------|---------------------------------------|------------------|------------------------------|------------------|
|   | For ø  | Stroke [mm] | With recirculating ball bearing guide |                  | With plain-bearing guide     |                  |
|   |        |             | Part no.                              | Type             | Part no.                     | Type             |
|  | 8, 10  | 1 ... 100   | 35197                                 | FEN-8/10-...-KF  | 35196                        | FEN-8/10-...-GF  |
|   | 12, 16 | 1 ... 200   | 33481                                 | FEN-12/16-...-KF | 19168                        | FEN-12/16-...-GF |
|   | 20     | 2 ... 250   | 33482                                 | FEN-20-...-KF    | 19169                        | FEN-20-...-GF    |
|   | 25     | 2 ... 250   | 33483                                 | FEN-25-...-KF    | 19170                        | FEN-25-...-GF    |

## Accessories

### Bellows kit DADB



| General technical data                          |      |   |            |            |            |    |    |    |    |
|---|------|---|------------|------------|------------|----|----|----|----|
| Type DADB-S1-                                   |      | 12  | 16         | 20         | 25         | 32 | 40 | 50 | 63 |
| Max. stroke range of the cylinder <sup>1)</sup> |      |   |            |            |            |    |    |    |    |
| DSNU  | [mm] | 10 ... 200  | 10 ... 200 | 10 ... 320 | 10 ... 500 |    |    |    |    |
| Type of mounting                                |      | Via threaded pin  |            |            |            |    |    |    |    |
| Mounting position                               |      | Any   |            |            |            |    |    |    |    |
| Media resistance                                |      | Dust, chippings, oil, grease, fuel (→ Internet: media resistance) |            |            |            |    |    |    |    |
| Ambient temperature <sup>2)</sup>               | [°C] | -10 ... +80   |            |            |            |    |    |    |    |
| Corrosion resistance class CRC <sup>3)</sup>    |      | 3   |            |            |            |    |    |    |    |

1) In conjunction with the bellows kit DADB

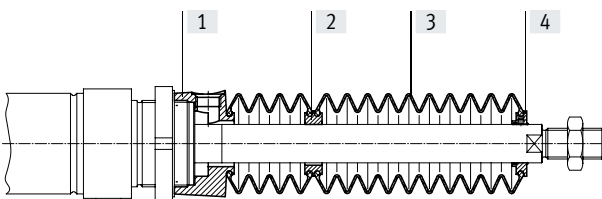
2) Note operating range of proximity switches and cylinder

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

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

## Materials

### Sectional view



| Bellows |                   |                         |
|---------|-------------------|-------------------------|
| [1]     | Connection        | Polyamide               |
| [2]     | Adapter           | Polyamide               |
| [3]     | Bellows           | NBR                     |
| [4]     | End piece         | Polyamide               |
| -       | O-ring            | NBR                     |
|         | Note on materials | Free of copper and PTFE |
|         |                   | RoHS-compliant          |

## Accessories

| <b>Weight [g]</b>            |    |    |     |     |
|------------------------------|----|----|-----|-----|
| Type DADB-S1-<br>Stroke [mm] | 12 | 16 | 20  | 25  |
| 10 ... 50                    | 7  | 7  | 20  | 19  |
| 51 ... 100                   | 9  | 9  | 32  | 31  |
| 101 ... 150                  | 13 | 13 | 45  | 44  |
| 151 ... 200                  | 16 | 16 | 58  | 57  |
| 201 ... 250                  | -  | -  | 73  | 72  |
| 251 ... 300                  | -  | -  | 85  | 84  |
| 301 ... 350                  | -  | -  | 100 | 98  |
| 351 ... 400                  | -  | -  | -   | 109 |
| 401 ... 450                  | -  | -  | -   | 124 |
| 451 ... 500                  | -  | -  | -   | 136 |

| Type DADB-S1-<br>Stroke [mm] | 32  | 40  | 50  | 63  |
|------------------------------|-----|-----|-----|-----|
|                              |     |     | 50  | 63  |
| 10 ... 50                    | 29  | 34  | 55  | 55  |
| 51 ... 125                   | 41  | 49  | 75  | 75  |
| 126 ... 175                  | 51  | 60  | 89  | 89  |
| 176 ... 250                  | 66  | 78  | 113 | 113 |
| 251 ... 300                  | 79  | 93  | 131 | 131 |
| 301 ... 350                  | 92  | 108 | 149 | 149 |
| 351 ... 375                  | 92  | 108 | 151 | 151 |
| 376 ... 425                  | 104 | 122 | 169 | 169 |
| 426 ... 475                  | 117 | 137 | 187 | 187 |
| 476 ... 500                  | 117 | 137 | 189 | 189 |

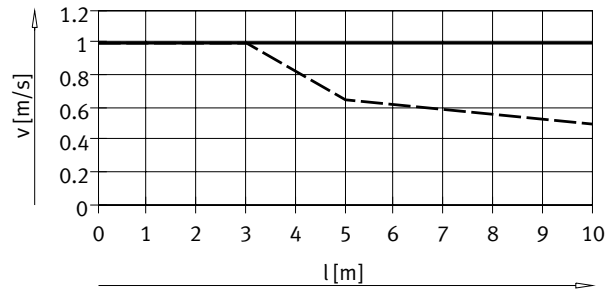
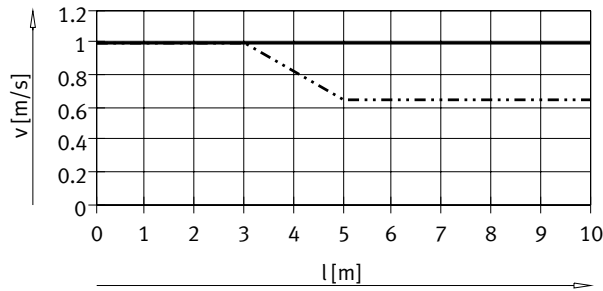
Accessories

Travel speed  $v$  as a function of tubing length  $l$



The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a pressure compensation hole in the connection part. The pressure generated in the bellows kit by the positioning motion is primarily defined by the travel speed and tubing length. The recommended tubing length based on the travel speed of the drive can be read from the graph.

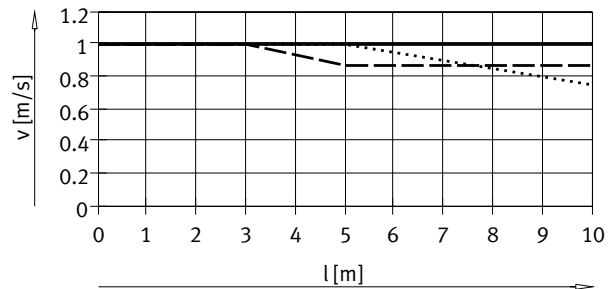
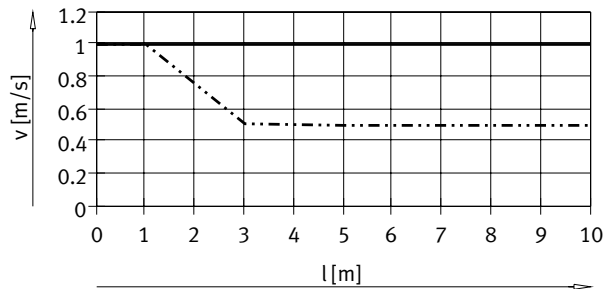
Advancing



— DSNU-12/16  
- · - · - DSNU-20/25


— DSNU-32/50/63  
- - - - - DSNU-40

Retracting



— DSNU-12/16  
- · - · - DSNU-20/25

— DSNU-32  
- - - - - DSNU-40  
- · - · - DSNU-50/63

 Note  
The push-in fittings in the adjacent table must be used for the pressure compensation hole. Silencers can be used as an alternative. This reduces the travel speed slightly.

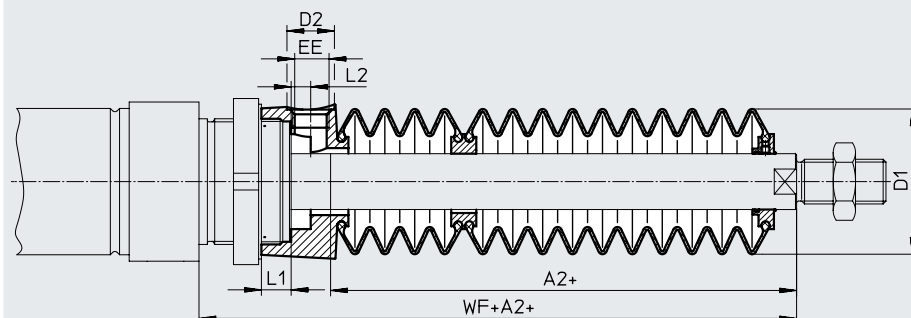
| Tubing size and push-in fitting for pressure compensation hole |                  |                 |                    |
|--|------------------|-----------------|--------------------|
| ∅ [mm]   | Tubing O.D. [mm] | Push-in fitting |                    |
|  |                  | Part no.        | Type               |
| 12, 16, 20, 25   | 6                | ★ 153317        | QSM-M5-6-I         |
|  |                  | 578371          | NPQH-DK-M5-Q6-P10  |
|  |                  | 578335          | NPQH-D-M5-Q6-P10   |
|  |                  | 578359          | NPQH-D-M5-S6-P10   |
| 32, 40   | 8                | ★ 186109        | QS-G1/8-8-I        |
|  |                  | 578376          | NPQH-DK-G18-Q8-P10 |
|  |                  | 578362          | NPQH-D-G18-S8-P10  |
| 50, 63   | 12               | ★ 186350        | QS-G1/4-12         |
|  |                  | 578344          | NPQH-D-G14-Q12-P10 |
|  |                  | 578366          | NPQH-D-G14-S12-P10 |



## Accessories

### Dimensions

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



| ∅<br>Stroke<br>[mm] | 12/16            |            |     |    |    |     |       | 20               |            |     |    |     |     |       |
|---------------------|------------------|------------|-----|----|----|-----|-------|------------------|------------|-----|----|-----|-----|-------|
|                     | A2 <sup>1)</sup> | D1<br>max. | D2  | EE | L1 | L2  | WF+A2 | A2 <sup>1)</sup> | D1<br>max. | D2  | EE | L1  | L2  | WF+A2 |
| 10 ... 50           | 23               | 22         | 8.5 | M5 | 5  | 3.2 | 45    | 22               | 29         | 8.5 | M5 | 4.2 | 2.7 | 46    |
| 51 ... 100          | 34               |            |     |    |    |     | 56    | 34               |            |     |    |     |     | 58    |
| 101 ... 150         | 48               |            |     |    |    |     | 70    | 47               |            |     |    |     |     | 71    |
| 151 ... 200         | 59               |            |     |    |    |     | 81    | 60               |            |     |    |     |     | 84    |
| 201 ... 250         | –                |            |     |    |    |     | –     | 75               |            |     |    |     |     | 99    |
| 251 ... 300         | –                |            |     |    |    |     | –     | 86               |            |     |    |     |     | 110   |
| 301 ... 350         | –                |            |     |    |    |     | –     | 101              |            |     |    |     |     | 125   |
| 351 ... 400         | –                |            |     |    |    |     | –     | –                |            |     |    |     |     | –     |
| 401 ... 450         | –                |            |     |    |    |     | –     | –                |            |     |    |     |     | –     |
| 451 ... 500         | –                | –          | –   | –  |    |     |       |                  |            |     |    |     |     |       |

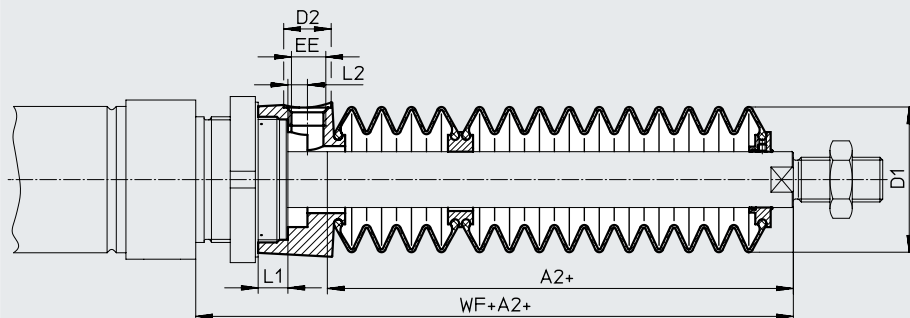
| ∅<br>Stroke<br>[mm] | 25               |            |     |    |     |     |       |
|---------------------|------------------|------------|-----|----|-----|-----|-------|
|                     | A2 <sup>1)</sup> | D1<br>max. | D2  | EE | L1  | L2  | WF+A2 |
| 10 ... 50           | 22               | 29         | 8.5 | M5 | 4.2 | 2.7 | 50    |
| 51 ... 100          | 34               |            |     |    |     |     | 62    |
| 101 ... 150         | 47               |            |     |    |     |     | 75    |
| 151 ... 200         | 60               |            |     |    |     |     | 88    |
| 201 ... 250         | 75               |            |     |    |     |     | 103   |
| 251 ... 300         | 86               |            |     |    |     |     | 114   |
| 301 ... 350         | 101              |            |     |    |     |     | 129   |
| 351 ... 400         | 112              |            |     |    |     |     | 140   |
| 401 ... 450         | 127              |            |     |    |     |     | 155   |
| 451 ... 500         | 138              | 166        |     |    |     |     |       |

1) The dimension corresponds to the K8 value (extended piston rod) of the drive

Accessories

Dimensions

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



| ∅<br>Stroke<br>[mm] | 32               |            |    |      |      |     |       | 40               |            |    |      |     |     |       |
|---------------------|------------------|------------|----|------|------|-----|-------|------------------|------------|----|------|-----|-----|-------|
|                     | A2 <sup>1)</sup> | D1<br>max. | D2 | EE   | L1   | L2  | WF+A2 | A2 <sup>1)</sup> | D1<br>max. | D2 | EE   | L1  | L2  | WF+A2 |
| 10 ... 50           | 30               | 38         | 14 | G1/8 | 12.9 | 5.4 | 64    | 29               | 46         | 14 | G1/8 | 8.1 | 5.4 | 68    |
| 51 ... 125          | 48               |            |    |      |      |     | 82    | 44               |            |    |      |     |     | 83    |
| 126 ... 175         | 63               |            |    |      |      |     | 97    | 57               |            |    |      |     |     | 96    |
| 176 ... 250         | 82               |            |    |      |      |     | 116   | 73               |            |    |      |     |     | 112   |
| 251 ... 300         | 97               |            |    |      |      |     | 131   | 87               |            |    |      |     |     | 126   |
| 301 ... 350         | 113              |            |    |      |      |     | 147   | 101              |            |    |      |     |     | 140   |
| 351 ... 375         | 115              |            |    |      |      |     | 149   | 102              |            |    |      |     |     | 141   |
| 376 ... 425         | 131              |            |    |      |      |     | 165   | 116              |            |    |      |     |     | 155   |
| 426 ... 475         | 147              |            |    |      |      |     | 181   | 131              |            |    |      |     |     | 170   |
| 476 ... 500         | 149              |            |    |      |      |     | 183   | 132              |            |    |      |     |     | 171   |

| ∅<br>Stroke<br>[mm] | 50/63            |            |    |      |       |    |         |
|---------------------|------------------|------------|----|------|-------|----|---------|
|                     | A2 <sup>1)</sup> | D1<br>max. | D2 | EE   | L1    | L2 | WF+A2   |
| 10 ... 50           | 30               | 57         | 17 | G1/4 | 10.65 | 7  | 74/75   |
| 51 ... 125          | 48               |            |    |      |       |    | 92/93   |
| 126 ... 175         | 58               |            |    |      |       |    | 102/103 |
| 176 ... 250         | 77               |            |    |      |       |    | 121/122 |
| 251 ... 300         | 88               |            |    |      |       |    | 132/133 |
| 301 ... 350         | 99               |            |    |      |       |    | 143/144 |
| 351 ... 375         | 106              |            |    |      |       |    | 150/151 |
| 376 ... 425         | 117              |            |    |      |       |    | 161/162 |
| 426 ... 475         | 128              |            |    |      |       |    | 172/173 |
| 476 ... 500         | 135              |            |    |      |       |    | 179/180 |

1) The dimension corresponds to the K8 value (extended piston rod) of the drive

## Accessories

## Ordering data – Bellows kit

An extended piston rod (order code K8) is absolutely essential when using a bellows kit → Ordering data – Modular product system.

The necessary dimension for K8 as a function of piston diameter and cylinder stroke as well as the corresponding bellows kit is indicated in the table below:

## Order example:

Selected round cylinder:

DSNU-25-320-PPV-A-MQ-...

The dimension for the corresponding K8 value (see table): 101 mm

Complete order reference for round cylinder:

DSNU-25-320-PPV-A-MQ-...-101K8

The corresponding bellows kit:

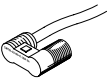
DADB-S1-25-S301-350

| Cylinder data |             |                  | Bellows kit         |                     |                     |
|---------------|-------------|------------------|---------------------|---------------------|---------------------|
| ∅             | Stroke      | Dimension for K8 | Part no.            | Type                |                     |
| [mm]          | [mm]        | [mm]             |                     |                     |                     |
| 12            | 10 ... 50   | 23               | 553391              | DADB-S1-12-S10-50   |                     |
|               | 51 ... 100  | 34               | 553393              | DADB-S1-12-S51-100  |                     |
|               | 101 ... 150 | 48               | 553395              | DADB-S1-12-S101-150 |                     |
|               | 151 ... 200 | 59               | 553397              | DADB-S1-12-S151-200 |                     |
| 20            | 10 ... 50   | 22               | 553407              | DADB-S1-20-S10-50   |                     |
|               | 51 ... 100  | 34               | 553409              | DADB-S1-20-S51-100  |                     |
|               | 101 ... 150 | 47               | 553411              | DADB-S1-20-S101-150 |                     |
|               | 151 ... 200 | 60               | 553413              | DADB-S1-20-S151-200 |                     |
|               | 201 ... 250 | 75               | 553415              | DADB-S1-20-S201-250 |                     |
|               | 251 ... 300 | 86               | 553417              | DADB-S1-20-S251-300 |                     |
|               | 301 ... 320 | 101              | 553419              | DADB-S1-20-S301-350 |                     |
| 32            | 10 ... 50   | 30               | 553441              | DADB-S1-32-S10-50   |                     |
|               | 51 ... 125  | 48               | 553443              | DADB-S1-32-S51-125  |                     |
|               | 126 ... 175 | 63               | 553445              | DADB-S1-32-S126-175 |                     |
|               | 176 ... 250 | 82               | 553447              | DADB-S1-32-S176-250 |                     |
|               | 251 ... 300 | 97               | 553449              | DADB-S1-32-S251-300 |                     |
|               | 301 ... 350 | 113              | 553451              | DADB-S1-32-S301-350 |                     |
|               | 351 ... 375 | 115              | 553453              | DADB-S1-32-S351-375 |                     |
|               | 376 ... 425 | 131              | 553455              | DADB-S1-32-S376-425 |                     |
|               | 426 ... 475 | 147              | 553457              | DADB-S1-32-S426-475 |                     |
|               | 476 ... 500 | 149              | 553459              | DADB-S1-32-S476-500 |                     |
| 50            | 10 ... 50   | 30               | 553481              | DADB-S1-50-S10-50   |                     |
|               | 51 ... 125  | 48               | 553483              | DADB-S1-50-S51-125  |                     |
|               | 126 ... 175 | 58               | 553485              | DADB-S1-50-S126-175 |                     |
|               | 176 ... 250 | 77               | 553487              | DADB-S1-50-S176-250 |                     |
|               | 251 ... 300 | 88               | 553489              | DADB-S1-50-S251-300 |                     |
|               | 301 ... 350 | 99               | 553491              | DADB-S1-50-S301-350 |                     |
|               | 351 ... 375 | 106              | 553493              | DADB-S1-50-S351-375 |                     |
|               | 376 ... 425 | 117              | 553495              | DADB-S1-50-S376-425 |                     |
|               | 426 ... 475 | 128              | 553497              | DADB-S1-50-S426-475 |                     |
|               | 476 ... 500 | 135              | 553499              | DADB-S1-50-S476-500 |                     |
|               | 16          | 10 ... 50        | 23                  | 553399              | DADB-S1-16-S10-50   |
| 51 ... 100    |             | 34               | 553401              | DADB-S1-16-S51-100  |                     |
| 101 ... 150   |             | 48               | 553403              | DADB-S1-16-S101-150 |                     |
| 151 ... 200   |             | 59               | 553405              | DADB-S1-16-S151-200 |                     |
| 25            |             | 10 ... 50        | 22                  | 553421              | DADB-S1-25-S10-50   |
|               |             | 51 ... 100       | 34                  | 553423              | DADB-S1-25-S51-100  |
|               |             | 101 ... 150      | 47                  | 553425              | DADB-S1-25-S101-150 |
|               |             | 151 ... 200      | 60                  | 553427              | DADB-S1-25-S151-200 |
|               |             | 201 ... 250      | 75                  | 553429              | DADB-S1-25-S201-250 |
|               |             | 251 ... 300      | 86                  | 553431              | DADB-S1-25-S251-300 |
|               |             | 301 ... 350      | 101                 | 553433              | DADB-S1-25-S301-350 |
|               |             | 351 ... 400      | 112                 | 553435              | DADB-S1-25-S351-400 |
|               | 401 ... 450 | 127              | 553437              | DADB-S1-25-S401-450 |                     |
| 451 ... 500   | 138         | 553439           | DADB-S1-25-S451-500 |                     |                     |
| 40            | 10 ... 50   | 29               | 553461              | DADB-S1-40-S10-50   |                     |
|               | 51 ... 125  | 44               | 553463              | DADB-S1-40-S51-125  |                     |
|               | 126 ... 175 | 57               | 553465              | DADB-S1-40-S126-175 |                     |
|               | 176 ... 250 | 73               | 553467              | DADB-S1-40-S176-250 |                     |
|               | 251 ... 300 | 87               | 553469              | DADB-S1-40-S251-300 |                     |
|               | 301 ... 350 | 101              | 553471              | DADB-S1-40-S301-350 |                     |
|               | 351 ... 375 | 102              | 553473              | DADB-S1-40-S351-375 |                     |
|               | 376 ... 425 | 116              | 553475              | DADB-S1-40-S376-425 |                     |
|               | 426 ... 475 | 131              | 553477              | DADB-S1-40-S426-475 |                     |
| 476 ... 500   | 132         | 553479           | DADB-S1-40-S476-500 |                     |                     |
| 63            | 10 ... 50   | 30               | 553501              | DADB-S1-63-S10-50   |                     |
|               | 51 ... 125  | 48               | 553503              | DADB-S1-63-S51-125  |                     |
|               | 126 ... 175 | 58               | 553505              | DADB-S1-63-S126-175 |                     |
|               | 176 ... 250 | 77               | 553507              | DADB-S1-63-S176-250 |                     |
|               | 251 ... 300 | 88               | 553509              | DADB-S1-63-S251-300 |                     |
|               | 301 ... 350 | 99               | 553511              | DADB-S1-63-S301-350 |                     |
|               | 351 ... 375 | 106              | 553513              | DADB-S1-63-S351-375 |                     |
|               | 376 ... 425 | 117              | 553515              | DADB-S1-63-S376-425 |                     |
|               | 426 ... 475 | 128              | 553517              | DADB-S1-63-S426-475 |                     |
|               | 476 ... 500 | 135              | 553519              | DADB-S1-63-S476-500 |                     |

## Accessories

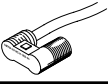
### Ordering data – Proximity switch, round design, magneto-resistive<sup>1)</sup>

Data sheets → Internet: smto

|  | Mounting         | Switching output | Electrical connection |         | Cable length<br>[m] | Outlet direction of connection | Part no.      | Type                       |
|--|------------------|------------------|-----------------------|---------|---------------------|--------------------------------|---------------|----------------------------|
|  |                  |                  | Cable                 | Plug M8 |                     |                                |               |                            |
| <b>N/O contact</b>   |                  |                  |                       |         |                     |                                |               |                            |
|  | With accessories | PNP              | 3-wire                | –       | 2.5                 | In-line                        | <b>152836</b> | <b>SMTO-4U-PS-K-LED-24</b> |
|  |                  |                  | –                     | 3-pin   | –                   | In-line                        | <b>152742</b> | <b>SMTO-4U-PS-S-LED-24</b> |
|  |                  | NPN              | 3-wire                | –       | 2.5                 | In-line                        | <b>152837</b> | <b>SMTO-4U-NS-K-LED-24</b> |
|  |                  |                  | –                     | 3-pin   | –                   | In-line                        | <b>152743</b> | <b>SMTO-4U-NS-S-LED-24</b> |

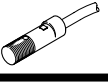
### Ordering data – Proximity switch, round design, magnetic reed<sup>1)</sup>

Data sheets → Internet: smeo

|  | Mounting         | Electrical connection |         | Cable length<br>[m] | Outlet direction of connection | Part no.                 | Type                      |
|--|------------------|-----------------------|---------|---------------------|--------------------------------|--------------------------|---------------------------|
|  |                  | Cable                 | Plug M8 |                     |                                |                          |                           |
| <b>N/O contact</b>   |                  |                       |         |                     |                                |                          |                           |
|  | With accessories | 3-wire                | –       | 2.5                 | In-line                        | <b>36198</b>             | <b>SMEO-4U-K-LED-24</b>   |
|  |                  |                       | 5       | In-line             | <b>175401</b>                  | <b>SMEO-4U-K5-LED-24</b> |                           |
|  |                  | –                     | 3-pin   | –                   | In-line                        | <b>151526</b>            | <b>SMEO-4U-S-LED-24-B</b> |




### Ordering data – Proximity switches, round design, magnetic reed, corrosion-resistant<sup>1)</sup>

Data sheets → Internet: crsmeo

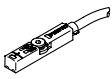
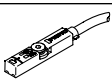
|  | Mounting         | Electrical connection |         | Cable length<br>[m] | Outlet direction of connection | Part no.      | Type                     |
|--|------------------|-----------------------|---------|---------------------|--------------------------------|---------------|--------------------------|
|  |                  | Cable                 | Plug M8 |                     |                                |               |                          |
| <b>N/O contact</b>   |                  |                       |         |                     |                                |               |                          |
|  | With accessories | 3-wire                | –       | 2.5                 | In-line                        | <b>161775</b> | <b>CRSMEO-4-K-LED-24</b> |
|  |                  |                       |         |                     |                                |               |                          |

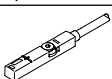
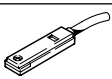
### Ordering data – Mounting kits for proximity switch SMEO/SMTO/CRSMEO<sup>1)</sup>


Data sheets → Internet: smbr


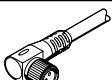
| Designation  | For ø | Part no.     | Type           | Designation   | For ø | Part no.      | Type             |
|--|-------|--------------|----------------|---|-------|---------------|------------------|
| <b>Mounting kit SMBR</b>   |       |              |                | <b>Mounting kit CRSMBR, corrosion resistant</b>                                     |       |               |                  |
|  | 8     | <b>19272</b> | <b>SMBR-8</b>  |  | 8     | –             | –                |
|  | 10    | <b>19273</b> | <b>SMBR-10</b> |   | 10    | –             | –                |
|  | 12    | <b>19274</b> | <b>SMBR-12</b> |   | 12    | <b>164581</b> | <b>CRSMBR-12</b> |
|  | 16    | <b>19275</b> | <b>SMBR-16</b> |   | 16    | <b>164582</b> | <b>CRSMBR-16</b> |
|  | 20    | <b>19276</b> | <b>SMBR-20</b> |   | 20    | <b>164583</b> | <b>CRSMBR-20</b> |
|  | 25    | <b>19277</b> | <b>SMBR-25</b> |   | 25    | <b>164584</b> | <b>CRSMBR-25</b> |
|  |       |              |                |  | 32    | <b>163888</b> | <b>CRSMBR-32</b> |
|  |       |              |                |   | 40    | <b>163889</b> | <b>CRSMBR-40</b> |
|  |       |              |                |   | 50    | <b>163890</b> | <b>CRSMBR-50</b> |
|  |       |              |                |   | 63    | <b>163891</b> | <b>CRSMBR-63</b> |

## Accessories

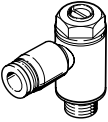
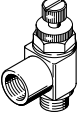
| Ordering data – Proximity switch for T-slot, magneto-resistive                    |  |                       |                   |          |                           | Data sheets → Internet: smt |
|---|--|-----------------------|-------------------|----------|---------------------------|-----------------------------|
| Type of mounting  | Switching output   | Electrical connection | Cable length [m]  | Part no. | Type                      |                             |
| <b>N/O contact</b>  |  |                       |                   |          |                           |                             |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP                   | Cable, 3-wire     | 2.5      | ★ 574335                  | SMT-8M-A-PS-24V-E-2.5-OE    |
|   |  |                       | Plug M8x1, 3-pin  | 0.3      | ★ 574334                  | SMT-8M-A-PS-24V-E-0.3-M8D   |
|   |  | NPN                   | Plug M12x1, 3-pin | 0.3      | ★ 574337                  | SMT-8M-A-PS-24V-E-0.3-M12   |
|   |  |                       | Cable, 3-wire     | 2.5      | ★ 574338                  | SMT-8M-A-NS-24V-E-2.5-OE    |
|   |  | Plug M8x1, 3-pin      | 0.3               | ★ 574339 | SMT-8M-A-NS-24V-E-0.3-M8D |                             |
| <b>N/C contact</b>  |  |                       |                   |          |                           |                             |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP                   | Cable, 3-wire     | 7.5      | ★ 574340                  | SMT-8M-A-PO-24V-E-7.5-OE    |

| Ordering data – Proximity switch for T-slot, magnetic reed                         |  |                       |                  |          |          | Data sheets → Internet: sme |
|--|--|-----------------------|------------------|----------|----------|-----------------------------|
| Type of mounting   | Switching output   | Electrical connection | Cable length [m] | Part no. | Type     |                             |
| <b>N/O contact</b>   |  |                       |                  |          |          |                             |
|   | Inserted in the slot from above, flush with the cylinder profile | Contacting            | Cable, 3-wire    | 2.5      | ★ 543862 | SME-8M-DS-24V-K-2.5-OE      |
|  |  |                       |                  | 5.0      | ★ 543863 | SME-8M-DS-24V-K-5.0-OE      |
|  |  |                       | Cable, 2-wire    | 2.5      | ★ 543872 | SME-8M-ZS-24V-K-2.5-OE      |
|  |  |                       | Plug M8x1, 3-pin | 0.3      | ★ 543861 | SME-8M-DS-24V-K-0.3-M8D     |
| <b>N/C contact</b>   |  |                       |                  |          |          |                             |
|  | Inserted in the slot lengthwise, flush with the cylinder profile | Contacting            | Cable, 3-wire    | 7.5      | 160251   | SME-8-O-K-LED-24            |

| Ordering data – Mounting kits for proximity switch SME/SMT-8                        |        |           |           | Data sheets → Internet: smbr |
|---|--------|-----------|-----------|------------------------------|
| Designation   | For Ø  | Part no.  | Type      |                              |
| <b>Mounting kit SMBR-8</b>  |        |           |           |                              |
|  | 8      | 175091    | SMBR-8-8  |                              |
|   | 10     | 175092    | SMBR-8-10 |                              |
|   | 12     | ★ 175093  | SMBR-8-12 |                              |
|   | 16     | ★ 175094  | SMBR-8-16 |                              |
|   | 20     | ★ 175095  | SMBR-8-20 |                              |
|   | 25     | ★ 175096  | SMBR-8-25 |                              |
|   | 32     | 175097    | SMBR-8-32 |                              |
|   | 40     | 175098    | SMBR-8-40 |                              |
|   | 50     | 175099    | SMBR-8-50 |                              |
| 63  | 175100 | SMBR-8-63 |           |                              |

| 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            |
|   | Straight socket, M12x1, 5-pin | Cable, open end, 3-wire | 2.5      | ★ 541363 | NEBU-M12G5-K-2.5-LE3         |
|   |                               |                         | 5        | ★ 541364 | NEBU-M12G5-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            |
|   | Angled socket, M12x1, 5-pin   | Cable, open end, 3-wire | 2.5      | 541367   | NEBU-M12W5-K-2.5-LE3         |
|   |                               |                         | 5        | 541370   | NEBU-M12W5-K-5-LE3           |

Accessories

| Ordering data – One-way flow control valves                                      |  |                 |              |                 | Data sheets → Internet: grl |          |                |  |
|--|--|-----------------|--------------|-----------------|-----------------------------|----------|----------------|--|
|  | Connection Thread  | For tubing O.D. | Material     | Part no.        | Type                        |          |                |  |
| <b>For exhaust air</b>   |  |                 |              |                 |                             |          |                |  |
|  | M5   | 3               | Metal design | ★ 193137        | GRLA-M5-QS-3-D              |          |                |  |
|  |  | 4               |              | ★ 193138        | GRLA-M5-QS-4-D              |          |                |  |
|  |  | 6               |              | ★ 193139        | GRLA-M5-QS-6-D              |          |                |  |
|  | G1/8   | 3               |              | ★ 193142        | GRLA-1/8-QS-3-D             |          |                |  |
|  |  | 4               |              | ★ 193143        | GRLA-1/8-QS-4-D             |          |                |  |
|  |  | 6               |              | ★ 193144        | GRLA-1/8-QS-6-D             |          |                |  |
|  |  | 8               |              | ★ 193145        | GRLA-1/8-QS-8-D             |          |                |  |
|  | G1/4   | 6               |              | ★ 193146        | GRLA-1/4-QS-6-D             |          |                |  |
|  |  | 8               |              | ★ 193147        | GRLA-1/4-QS-8-D             |          |                |  |
|  |  | 10              |              | ★ 193148        | GRLA-1/4-QS-10-D            |          |                |  |
|  | G3/8   | 6               |              | ★ 193149        | GRLA-3/8-QS-6-D             |          |                |  |
|  |  | 8               |              | ★ 193150        | GRLA-3/8-QS-8-D             |          |                |  |
|  |  | 10              |              | ★ 193151        | GRLA-3/8-QS-10-D            |          |                |  |
|  | <b>For supply air</b>  |                 |              |                 |                             |          |                |  |
|  |  | M5              |              | 3               | Metal design                | ★ 193153 | GRLZ-M5-QS-3-D |  |
| 4  |  |                 | ★ 193154     | GRLZ-M5-QS-4-D  |                             |          |                |  |
| 6  |  |                 | ★ 193155     | GRLZ-M5-QS-6-D  |                             |          |                |  |
| G1/8   |  | 3               | ★ 193156     | GRLZ-1/8-QS-3-D |                             |          |                |  |
|  |  | 4               | ★ 193157     | GRLZ-1/8-QS-4-D |                             |          |                |  |
|  |  | 6               | ★ 193158     | GRLZ-1/8-QS-6-D |                             |          |                |  |
|  |  | 8               | ★ 193159     | GRLZ-1/8-QS-8-D |                             |          |                |  |