

Standards-based cylinders DSBG to ISO 15552



Standards-based cylinders DSBG to ISO 15552

Key features

At a glance



DIN



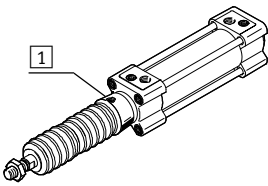
- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)

- Sturdy tie rod design
- Double-acting
- For contactless position sensing
- Available with protection against rotation
- EX4: for use in potentially explosive areas
- Extensive range of accessories makes it possible to install the cylinder virtually anywhere

- Three types of cushioning available:
 - P cushioning: elastic cushioning rings/pads at both ends
 - PPS cushioning: pneumatic cushioning, self-adjusting at both ends
 - PPV cushioning: pneumatic cushioning, adjustable at both ends

- The variants can be configured according to individual needs using a modular product system
- High flexibility thanks to the wide range of variants

DSBG-...-P2 – With bellows kit DADB, to ISO 15552



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 must be ducted via a pressure compensation hole in the connection part **1**.

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

- Dust
- Chippings
- Oil
- Grease
- Fuel

Ordering the bellows kit

An extended piston rod is absolutely essential if a bellows kit is to be used. The bellows kit can be ordered via the modular product system or as an accessory. The following must be noted in this case:

Ordering via the modular product system:

The bellows kit is supplied mounted on the bearing cap using feature P2. The required piston rod extension is automatically taken into consideration. This means that there is no need to specify a value for feature ...E.

Ordering as an accessory:

If the bellows kit is ordered as an accessory, the required value → page 39 must be entered for feature ...E in the modular product system.

Position sensing/force control

With position sensor SMAT-8M, SMAT-8E, SDAT → page 43



Analogue position feedback possible

- Analogue output
 - 0 ... 10 V
 - 0 ... 20 mA

With proportional pressure regulator VPPM



Infinite adjustment of the gripping force possible


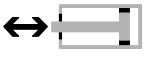






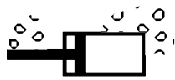
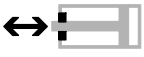
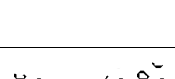


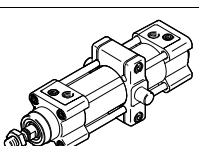
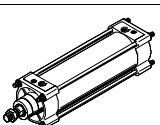
- Setpoint input
 - 0 ... 10 V
 - 4 ... 20 mA

Variants from the modular product system

| Symbol | Key features | Description |
|--------|---------------------|---|
| | Q Square piston rod | Protection against rotation. For correctly oriented feeding |
| | L Low friction | <ul style="list-style-type: none"> Break-away pressure: high Dynamic response: very fast Resistance: minimal resistance during the movement, greatest stick-slip Sample application: belt tensioner <ul style="list-style-type: none"> Suitable for applications that require a dynamic movement Efficient at speeds above 50 mm/s |

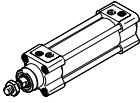
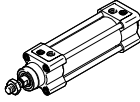
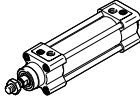
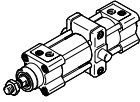
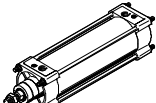
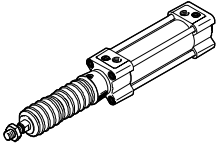
Standards-based cylinders DSBG, to ISO 15552

Key features

| Variants from the modular product system | | |
|---|--|---|
| Symbol | Key features | Description |
|  | U Uniform, slow movement | <ul style="list-style-type: none"> • Break-away pressure: low • Dynamic response: slow and constant • Resistance: strong resistance during the movement, minimal stick-slip Sample application: slow feed motion <ul style="list-style-type: none"> • Suitable for slow movements at a constant speed over the stroke range |
|  | L1 Low friction for balancer applications | <ul style="list-style-type: none"> • Break-away pressure: low • Dynamic response: slow to fast, constant • Resistance: low, constant during movement Sample application: mass balancing, no hysteresis, balancer <ul style="list-style-type: none"> • The resistance is constant and low, regardless of the working pressure • Upward and downward movements as well as fast/slow movements always need an identical, low force |
|  | T Through piston rod | For working at both ends with the same force in the forward and return stroke, for attaching external stops |
|  | F Female piston rod thread | – |
|  | R3 High corrosion protection | All external cylinder surfaces comply with corrosion resistance class 3 to Festo standard 940 070. The piston rod is made from corrosion and acid-resistant steel |
|  | T1 Heat-resistant seals | Temperature range 0 ... +120 °C |
|  | T3 Low temperature | Temperature range –40 ... +80 °C |
|  | T4 Heat-resistant seals | Temperature range 0 ... +150 °C |
|  | A2 Scraper variant | Hard scraper: The cylinder is equipped with a hard-chrome plated piston rod and a hard scraper, which protects against dry, dusty and viscous media |
|  | A3 Scraper variant | Unlubricated operation: Cleaning processes degrease the piston rod. A special piston rod seal designed for unlubricated operation permits a longer service life compared to the standard seal |
|  | A6 Scraper variant | Metal scraper The cylinder is fitted with a hard-chrome plated piston rod and metal scraper, which scrapes off hard particles (e.g. welding spatter) sticking to the piston rod. For use in welding systems, for example |
|  | ...E Piston rod extension | 1 ... 500 mm |
|  | ...L Piston rod thread extension | 1 ... 70 mm |
| | ...S Piston rod thread shortening | 1 ... 44 mm |
| | M... Piston rod thread | Piston rod thread version: M16/M16x1.5/M20/M20x1.5/M24/M27 |
|  | ...V Swivel mounting position | <ul style="list-style-type: none"> • Swivel mounting, position freely selectable • Position can be moved at any time |
|  | Thread length of spacer bolts: ...LB2 On the bearing cap ...LB3 On the end cap | <ul style="list-style-type: none"> • Variable thread length: 20 ... 140 mm • Optionally on the bearing or end cap |

Standards-based cylinders DSBG, to ISO 15552

Product range overview

| Function | Design | Type | Piston Ø | Stroke | Through piston rod | Female piston rod thread | Cushioning | | | |
|---|---|-------------------------|------------------------------|-------------|--------------------|--------------------------|------------|---|---|---|
| | | | [mm] | [mm] | | | | | | T |
| Double-acting | DSBG-... | | | | | | | | | |
| |  | DSBG-... | 32, 40, 50, 63, 80, 100, 125 | 1 ... 2800 | | ■ | ■ | ■ | ■ | ■ |
| | DSBG-...-Q – With protection against rotation | | | | | | | | | |
| |  | DSBG-...-Q | 32, 40, 50, 63, 80, 100 | 1 ... 1500 | | ■ | ■ | ■ | ■ | ■ |
| | DSBG-...-L/-U/-L1 – With special running characteristics | | | | | | | | | |
| |  | DSBG-...-L | 32, 40, 50, 63, 80, 100 | 1 ... 2800 | | - | ■ | ■ | ■ | ■ |
| | | DSBG-...-U | 32, 40, 50, 63, 80, 100, 125 | 1 ... 2800 | | - | ■ | ■ | ■ | ■ |
| | | DSBG-...-L1 | 32, 40, 50, 63, 80, 100, 125 | 10 ... 1000 | | - | ■ | ■ | ■ | - |
| | DSBG-...-...V – With swivel mounting position | | | | | | | | | |
| |  | DSBG-...-...V | 32, 40, 50, 63, 80, 100, 125 | 10 ... 2800 | | ■ | ■ | ■ | ■ | ■ |
| DSBG-...-...LB2/3 – with spacer bolt on the bearing/end cap | | | | | | | | | | |
|  | DSBG-...-...LB2/3 | 80, 100, 125 | 10 ... 2800 | | ■ | ■ | ■ | ■ | ■ | |
| DSBG-...-P2 – With bellows | | | | | | | | | | |
|  | DSBG-...-P2 | 32, 40, 50, 63, 80, 100 | 10 ... 500 | | ■ | ■ | ■ | ■ | ■ | |

Standards-based cylinders DSBG, to ISO 15552

Product range overview

| Type | Position sensing | High corrosion protection | Temperature range 0 ... +120 °C | Temperature range -40 ... +80 °C | Temperature range 0 ... +150 °C | Scraper variant hard scraper (ring) | Scraper variant for unlubricated operation | Scraper variant metal scraper | EU certification | Piston rod extension | Piston rod thread extension | Piston rod thread shortening |
|--|------------------|---------------------------|------------------------------------|-------------------------------------|------------------------------------|--|---|----------------------------------|------------------|----------------------|--------------------------------|---------------------------------|
| | A | R3 | T1 | T3 | T4 | A2 | A3 | A6 | EX4 | ...E | ...L | ...S |
| DSBG-... | | | | | | | | | | | | |
| DSBG-... | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| DSBG-...-Q – With protection against rotation | | | | | | | | | | | | |
| DSBG-...-Q | ■ | ■ | ■ | - | - | - | - | - | ■ | ■ | ■ | ■ |
| DSBG-...-L/-U/-L1 – With special running characteristics | | | | | | | | | | | | |
| DSBG-...-L | ■ | - | - | - | - | - | - | - | - | ■ | ■ | ■ |
| DSBG-...-U | ■ | - | - | - | - | - | - | - | - | ■ | ■ | ■ |
| DSBG-...-L1 | ■ | - | - | - | - | - | - | - | - | ■ | ■ | ■ |
| DSBG-...-...V – With swivel mounting position | | | | | | | | | | | | |
| DSBG-...-...V | ■ | - | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| DSBG-...-...LB2/3 – with spacer bolt on the bearing/end cap | | | | | | | | | | | | |
| DSBG-...-...LB2/3 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| DSBG-...-P2 – With bellows | | | | | | | | | | | | |
| DSBG-...-P2 | ■ | ■ | - | - | - | - | - | - | - | ■ | ■ | ■ |

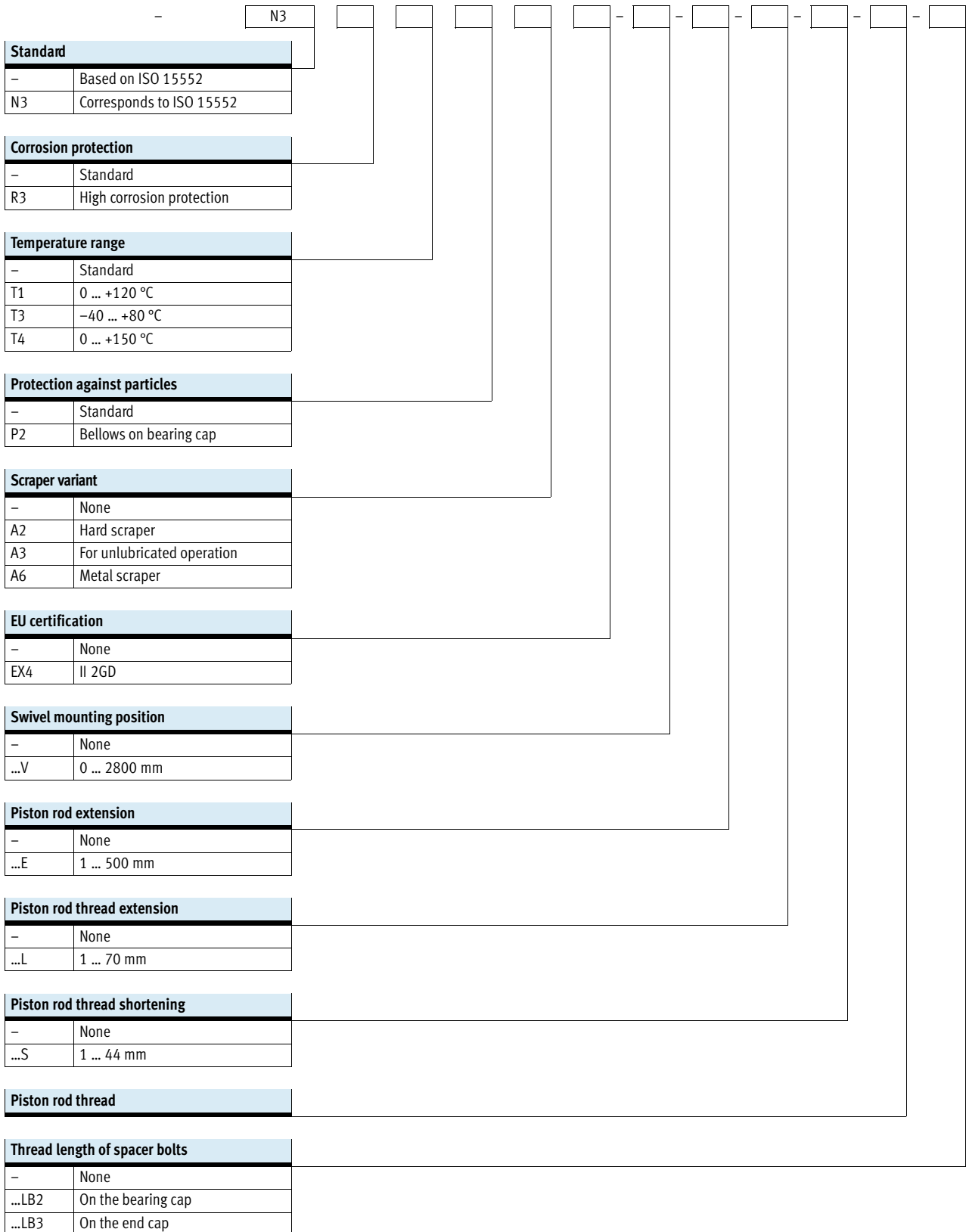
Standards-based cylinders DSBG, to ISO 15552

Type codes

| | | | | | | | | | | | | | | | | |
|------------------------------------|---|------|---|--|---|----|---|----|---|--|---|--|---|-----|---|---|
| | | DSBG | - | | - | 32 | - | 50 | - | | - | | - | PPV | - | A |
| Type | | | | | | | | | | | | | | | | |
| Double-acting | | | | | | | | | | | | | | | | |
| DSBG | Standards-based cylinder | | | | | | | | | | | | | | | |
| Protection against rotation | | | | | | | | | | | | | | | | |
| - | Without protection against rotation | | | | | | | | | | | | | | | |
| Q | With protection against rotation | | | | | | | | | | | | | | | |
| Running characteristics | | | | | | | | | | | | | | | | |
| - | Standard | | | | | | | | | | | | | | | |
| L | Low friction | | | | | | | | | | | | | | | |
| U | Constant, slow movement | | | | | | | | | | | | | | | |
| L1 | Low friction for balancer applications | | | | | | | | | | | | | | | |
| Piston Ø [mm] | | | | | | | | | | | | | | | | |
| Stroke [mm] | | | | | | | | | | | | | | | | |
| Piston rod | | | | | | | | | | | | | | | | |
| - | Piston rod at one end | | | | | | | | | | | | | | | |
| T | Through piston rod | | | | | | | | | | | | | | | |
| Piston rod thread type | | | | | | | | | | | | | | | | |
| - | Male thread | | | | | | | | | | | | | | | |
| F | Female thread | | | | | | | | | | | | | | | |
| Cushioning | | | | | | | | | | | | | | | | |
| P | Elastic cushioning rings/pads at both ends | | | | | | | | | | | | | | | |
| PPS | Pneumatic cushioning, self-adjusting at both ends | | | | | | | | | | | | | | | |
| PPV | Pneumatic cushioning, adjustable at both ends | | | | | | | | | | | | | | | |
| Position sensing | | | | | | | | | | | | | | | | |
| A | Via proximity sensor | | | | | | | | | | | | | | | |

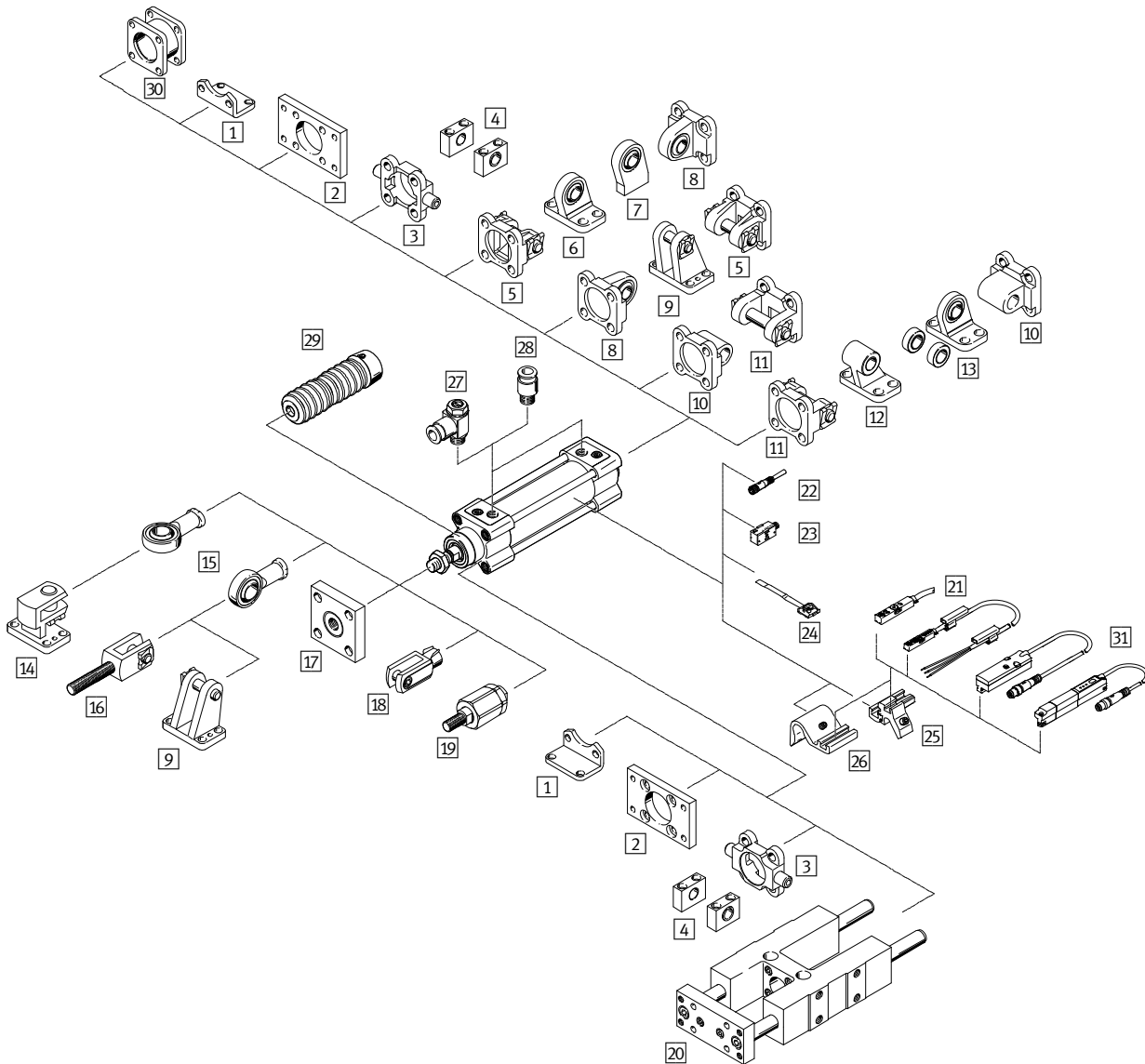
Standards-based cylinders DSBG, to ISO 15552

Type code



Standards-based cylinders DSBG, to ISO 15552

Peripherals overview



| Mounting components and accessories | | | | | | |
|-------------------------------------|---------------------------------|---|---------------|----|---------------------|----|
| | Description | DSBG... | | | → Page/ Internet | |
| | | | -L/-U/ -L1 | -T | | |
| 1 | Foot mounting HNC/CRHNC | For bearing or end caps | ■ | ■ | ■ | 26 |
| 2 | Flange mounting FNC/CRFNG | - For bearing or end caps - Cannot be used on the bearing cap in combination with bellows kit DADB | ■ | ■ | ■ | 27 |
| 3 | Trunnion flange ZNCF/CRZNG | - For bearing or end caps - Cannot be used on the bearing cap in combination with bellows kit DADB | ■ | ■ | ■ | 28 |
| 4 | Trunnion support LNZG/CRLNZG | - | ■ | ■ | ■ | 29 |
| 5 | Swivel flange SNC | For end caps | ■ | ■ | - | 30 |
| 6 | Clevis foot LSNG | With spherical bearing | ■ | ■ | - | 34 |

Standards-based cylinders DSBG, to ISO 15552

Peripherals overview

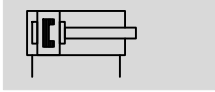
| Mounting components and accessories | | | | | | |
|-------------------------------------|--|---|---------------|----|---------------------|----|
| | Description | DSBG-... | | | → Page/ Internet | |
| | | | -L/-U/ -L1 | -T | | |
| 7 | Clevis foot LSNSG | Weld-on, with spherical bearing | ■ | ■ | - | 34 |
| 8 | Swivel flange SNCS/CRSNCS/SNCS-...-R3 | With spherical bearing for end caps | ■ | ■ | - | 32 |
| 9 | Clevis foot LBG/LBG-...-R3 | - | ■ | ■ | - | 34 |
| 10 | Swivel flange SNCL | For end caps | ■ | ■ | - | 33 |
| 11 | Swivel flange SNCB/SNCB-...-R3 | For end caps | ■ | ■ | - | 31 |
| 12 | Clevis foot LNG/CRLNG | - | ■ | ■ | - | 34 |
| 13 | Clevis foot LSN | With spherical bearing | ■ | ■ | - | 34 |
| 14 | Right-angle clevis foot LQG | - | ■ | ■ | ■ | 34 |
| 15 | Rod eye SGS/CRSGS | With spherical bearing | ■ | ■ | ■ | 35 |
| 16 | Rod clevis SGA | With male thread | ■ | ■ | ■ | 35 |
| 17 | Coupling piece KSG | To compensate for radial deviations | ■ | ■ | ■ | 35 |
| | Coupling piece KSZ | For cylinders with a non-rotating piston rod to compensate for radial deviations | ■ | ■ | ■ | 35 |
| 18 | Rod clevis SG/CRSG | Permits a swivel motion of the cylinder in one plane | ■ | ■ | ■ | 35 |
| 19 | Self-aligning rod coupler FK, CRFK | For compensating radial and angular misalignments | ■ | ■ | ■ | 35 |
| 20 | Guide unit FENG | For protecting standards-based cylinders against rotation at high torque loads | ■ | ■ | ■ | 41 |
| 21 | Proximity sensor SME/SMT-8M | Can be integrated in the cylinder profile barrel | ■ | ■ | ■ | 42 |
| 22 | Connecting cable NEBU | - | ■ | ■ | ■ | 42 |
| 23 | Proximity sensor SMPO-1-H-B | - | ■ | ■ | ■ | 44 |
| 24 | Mounting kit SMBS | For proximity sensor SMPO-1-H-B | ■ | ■ | ■ | 44 |
| 25 | Mounting kit SMBZ-8- ... | For proximity sensor SME/SMT-8M, for piston \varnothing 32 ... 100 | ■ | ■ | ■ | 43 |
| 26 | Sensor bracket DASP-M4- ... | For proximity sensor SME/SMT-8M, for piston \varnothing 125 | ■ | ■ | ■ | 43 |
| 27 | One-way flow control valve GRLA | For speed regulation | ■ | ■ | ■ | 44 |
| 28 | Push-in fitting QS | For connecting compressed air tubing with standard O.D. | ■ | ■ | ■ | qs |
| 29 | Bellows kit DADB | - Protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear - Can only be used in combination with an extended piston rod (E) | ■ | - | ■ | 36 |
| 30 | Multi-position kit DPNC | For connecting two cylinders with identical piston diameters to form a multi-position cylinder | ■ | - | ■ | 40 |
| 31 | Position sensor SMAT, SDAT | - Continuously senses the position of the piston - Has an analogue output | ■ | ■ | ■ | 43 |

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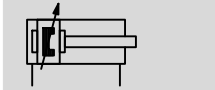
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Technical data

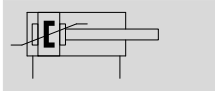
Function
P cushioning



PPV cushioning





PPS cushioning



DIN



-  - Diameter
32 ... 125 mm

-  - Stroke length
1 ... 2800 mm

-  - www.festo.com



| General technical data | | | | | | | | |
|------------------------|---|-------------|------|------|------|------|------|------|
| Piston \varnothing | | 32 | 40 | 50 | 63 | 80 | 100 | 125 |
| Design | Piston/piston rod/cylinder barrel | | | | | | | |
| Mode of operation | Double-acting | | | | | | | |
| Pneumatic port | | G1/8 | G1/4 | G1/4 | G3/8 | G3/8 | G1/2 | G1/2 |
| Stroke | | | | | | | | |
| DSBG-... | [mm] | 1 ... 2800 | | | | | | |
| DSBG-...-Q | [mm] | 1 ... 1500 | | | | | | - |
| DSBG-...-L1 | [mm] | 10 ... 1000 | | | | | | |
| DSBG-...-P2 | [mm] | 10 ... 500 | | | | | | - |
| DSBG-...-...E | [mm] | 1 ... 2000 | | | | | | |
| DSBG-...-...L | [mm] | 1 ... 2000 | | | | | | |
| Cushioning | | | | | | | | |
| DSBG-...-P | Elastic cushioning rings/pads at both ends | | | | | | | |
| DSBG-...-PPV | Pneumatic cushioning, adjustable at both ends | | | | | | | |
| DSBG-...-PPS | Pneumatic cushioning, self-adjusting at both ends | | | | | | | |
| Cushioning length | | | | | | | | |
| DSBG-...-PPV | [mm] | 17 | 19 | 22 | 22 | 31 | 31 | 45 |
| Position sensing | Via proximity sensor | | | | | | | |
| Type of mounting | Via internal thread/accessories | | | | | | | |
| Mounting position | Any | | | | | | | |

Standards-based cylinders DSBG, to ISO 15552

Technical data

| Operating and environmental conditions | | | | | | | | |
|--|--|-----------------|-------------|------------|-------------|-------------|-------------|------------|
| Piston Ø | | 32 | 40 | 50 | 63 | 80 | 100 | 125 |
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] | | | | | | | |
| Note on operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) | | | | | | | |
| Operating pressure | | | | | | | | |
| DSBG-... | [bar] | 0.6 ... 12 | | 0.4 ... 12 | | | 0.2 ... 10 | |
| DSBG-...-L ¹⁾ | [bar] | 0.3 ... 12 | 0.25 ... 12 | | 0.2 ... 12 | 0.15 ... 12 | | - |
| DSBG-...-U ¹⁾ | [bar] | 0.1 ... 12 | | | 0.05 ... 12 | | 0.05 ... 10 | |
| DSBG-...-L1 ¹⁾ | [bar] | 0.3 ... 12 | 0.25 ... 12 | | 0.2 ... 12 | 0.15 ... 12 | | 0.1 ... 10 |
| DSBG-...-T3/-A2 | [bar] | 1 ... 12 | | | | | | 1 ... 10 |
| DSBG-...-A3 | [bar] | 1.5 ... 12 | | 1 ... 12 | 0.6 ... 12 | | 0.6 ... 10 | |
| DSBG-...-A6 | [bar] | 2 ... 12 | 1.5 ... 12 | | | | | 1.5 ... 10 |
| Ambient temperature ²⁾ | | | | | | | | |
| DSBG-... | [°C] | -20 ... +80 | | | | | | |
| DSBG-...-L/-U | [°C] | +5 ... +80 | | | | | | |
| DSBG-...-L1 | [°C] | 0 ... +60 | | | | | | |
| DSBG-...-A1 | [°C] | 0 ... +80 | | | | | | |
| DSBG-...-A6 | [°C] | -20 ... +80 | | | | | | |
| DSBG-...-T1-A6 | [°C] | 0 ... +120 | | | | | | |
| DSBG-...-T3-A6 | [°C] | -40 ... +80 | | | | | | |
| DSBG-...-T4-A6 | [°C] | 0 ... +150 | | | | | | |
| DSBG-...-T1 | [°C] | 0 ... +120 | | | | | | |
| DSBG-...-T3 | [°C] | -40 ... +80 | | | | | | |
| DSBG-...-T4 | [°C] | 0 ... +150 | | | | | | |
| DSBG-...-P2 | [°C] | -10 ... +80 | | | | | | - |
| DSBG-...-EX4 | [°C] | -20 ... +60 | | | | | | |
| Corrosion resistance class CRC | | | | | | | | |
| DSBG-... | | 2 ³⁾ | | | | | | |
| DSBG-...-R3 | | 3 ⁴⁾ | | | | | | |

1) Values apply only for strokes ≤ 500 mm and after 10 double strokes.

In combination with cushioning PPV/PPS, the specifications only apply outside the cushioning range

2) Note operating range of proximity sensors

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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

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

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Technical data

| Weight [g] | | | | | | | |
|------------------------------------|-----|-----|------|------|------|------|------|
| Piston Ø | 32 | 40 | 50 | 63 | 80 | 100 | 125 |
| DSBG-... | | | | | | | |
| Product weight with 0 mm stroke | 465 | 740 | 1190 | 1740 | 2660 | 3665 | 6611 |
| Additional weight per 10 mm stroke | 25 | 35 | 52 | 55 | 85 | 94 | 143 |
| Moving mass with 0 mm stroke | 110 | 205 | 365 | 430 | 810 | 1000 | 2245 |
| Moving mass per 10 mm stroke | 9 | 16 | 25 | 25 | 39 | 39 | 63 |
| DSBG-...-Q | | | | | | | |
| Product weight with 0 mm stroke | 503 | 755 | 1241 | 1821 | 2717 | 3827 | - |
| Additional weight per 10 mm stroke | 25 | 30 | 47 | 50 | 78 | 87 | - |
| Moving mass with 0 mm stroke | 115 | 170 | 332 | 391 | 757 | 890 | - |
| Moving mass per 10 mm stroke | 8 | 11 | 20 | 20 | 31 | 31 | - |
| DSBG-...-T | | | | | | | |
| Product weight with 0 mm stroke | 581 | 924 | 1523 | 2103 | 3243 | 4353 | 7450 |
| Additional weight per 10 mm stroke | 34 | 50 | 76 | 97 | 123 | 133 | 206 |
| Moving mass with 0 mm stroke | 181 | 339 | 613 | 684 | 1292 | 1516 | 3084 |
| Moving mass per 10 mm stroke | 18 | 32 | 50 | 50 | 78 | 78 | 126 |

| ATEX ¹⁾ | |
|--|---|
| ATEX category for gas | II 2G |
| Type of (ignition) protection for gas | c T4 |
| ATEX category for dust | II 2D |
| Type of (ignition) protection for dust | c T120°C |
| Explosion-proof ambient temperature | -20°C ≤ Ta ≤ +60°C |
| CE marking (see declaration of conformity) | As per EU Explosion Protection Directive (ATEX) |

1) Note the ATEX certification of the accessories.

| Forces [N] and impact energy [J] | | | | | | | |
|---|-----|------|------|------|------|------|------|
| Piston Ø | 32 | 40 | 50 | 63 | 80 | 100 | 125 |
| Theoretical force at 6 bar, advancing | 483 | 754 | 1178 | 1870 | 3016 | 4712 | 7363 |
| Theoretical force at 6 bar, retracting | 415 | 633 | 990 | 1682 | 2721 | 4418 | 6881 |
| Max. impact energy in the end positions | | | | | | | |
| DSBG-... | 0.4 | 0.7 | 1.0 | 1.3 | 1.8 | 2.5 | 3.3 |
| DSBG-...-L/-U/-T1/-T3/-T4 | 0.2 | 0.35 | 0.5 | 0.65 | 0.9 | 1.25 | 1.65 |
| DSBG-...-L1 | 0.1 | 0.2 | 0.3 | 0.4 | 0.9 | 1.25 | 1.65 |

Permissible impact velocity

$$v_{perm.} = \sqrt{\frac{2 \times E_{perm.}}{m_{intrinsic} + m_{Load}}}$$

Maximum permissible load:

$$m_{Load} = \frac{2 \times E_{perm.}}{v^2} - m_{intrinsic}$$

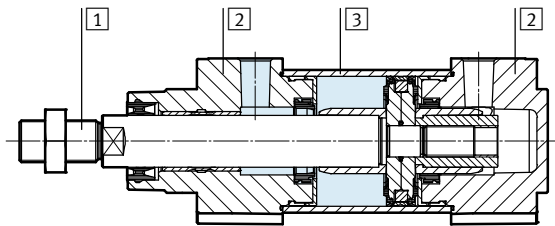
$v_{perm.}$ Permissible impact velocity
 $E_{perm.}$ Max. impact energy
 $m_{intrinsic}$ Moving mass (drive)
 m_{Load} Moving payload

Standards-based cylinders DSBG, to ISO 15552

Technical data

Materials

Sectional view



Standards-based cylinder

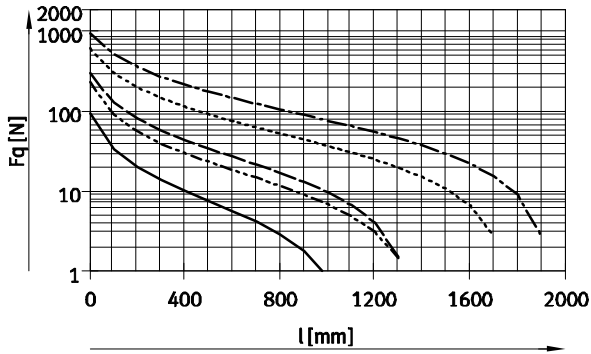
| | | |
|---|---------------------------|--|
| 1 | Piston rod, tie rod | |
| | DSBG-... | High-alloy steel |
| | DSBG-...-R3 | High-alloy stainless steel |
| | DSBG-...-A2/-A6 | Hard-chromium plated tempered steel |
| 2 | Cover | Die-cast aluminium, coated |
| 3 | Cylinder barrel | Anodised wrought aluminium alloy |
| - | Piston rod seal | |
| | DSBG-... | PUR |
| | DSBG-...-L/-U | FPM |
| | DSBG-...-L1 | HNBR |
| | DSBG-...-T1/-T4/-A1 | FPM |
| | DSBG-...-T3 | PUR (suitable for low temperatures) |
| | DSBG-...-A3 | UHMW-PE |
| | Rod wiper seal | |
| | DSBC-...-A6 | CuZn |
| | Buffer seal | |
| | DSBG-... | PUR |
| | DSBG-...-U | FPM |
| | DSBG-...-T1/-T4 | FPM |
| | DSBG-...-T3 | PUR (suitable for low temperatures) |
| | Cushioning boss | |
| | DSBG-... | POM |
| | DSBG-...-L/-U | Aluminium |
| | DSBG-...-T1/-T3/-T4 | Aluminium |
| - | Note on materials | |
| | DSBG-... | RoHS compliant |
| | DSBG-...-L/-U/-T3/-T4/-A3 | Contains paint-wetting impairment substances |

Standards-based cylinders DSBG, to ISO 15552

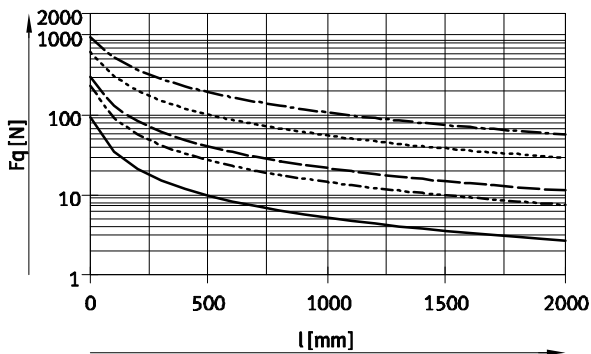
Technical data

Max. transverse force F_q as a function of stroke length l

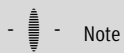
Horizontal mounting



Vertical mounting



- \varnothing 32
- - - \varnothing 40
- · - \varnothing 50/63
- · - \varnothing 80/100
- - - \varnothing 125



Note
No transverse forces are permitted in combination with feature DSBG-...-L1.

Permissible torsional backlash with variant Q – With protection against rotation

| Piston \varnothing | | 32 | 40 | 50 | 63 | 80 | 100 |
|----------------------|-----|------------|-----------|------------|------------|------------|------------|
| Torsional backlash | [°] | ± 0.65 | ± 0.6 | ± 0.45 | ± 0.45 | ± 0.45 | ± 0.45 |

Standards-based cylinders DSBG, to ISO 15552

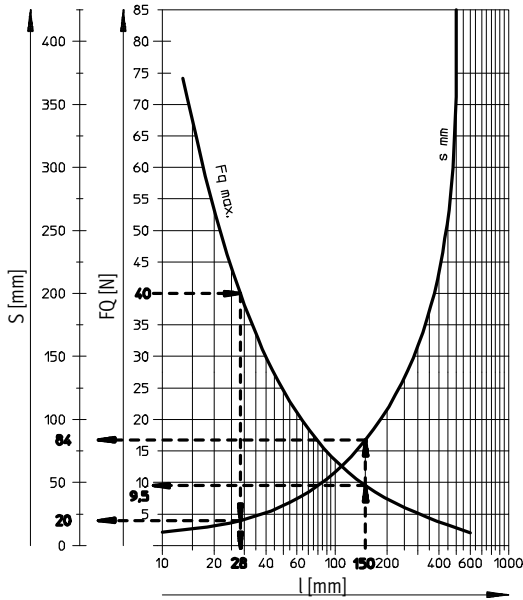
Technical data

Max. transverse force F_q as a function of stroke length l and lever arm s

Q – With protection against rotation

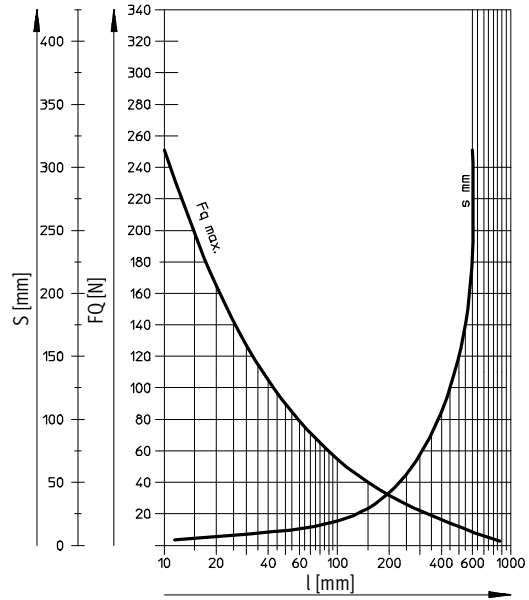
Ø 32

Max. torque = 800 Nmm/max. stroke = 300 mm



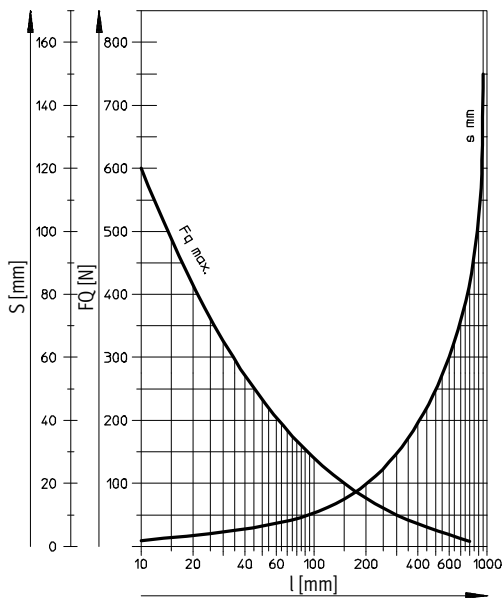
Ø 40

Max. torque = 1100 Nmm/max. stroke = 400 mm



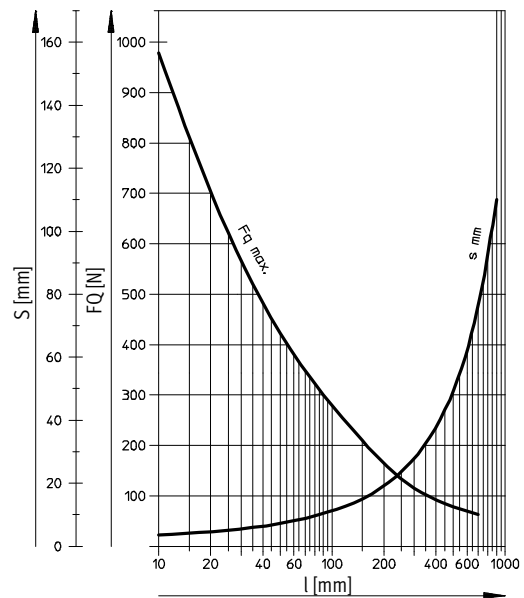
Ø 50/63

Max. torque = 1500 Nmm/max. stroke = 500 mm



Ø 80/100

Max. torque = 3000 Nmm/max. stroke = 600 mm



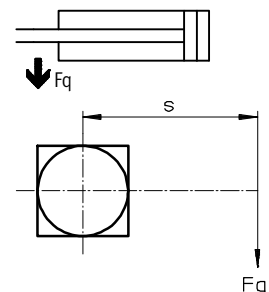
Examples for piston Ø 32 mm

Example 1:
Stroke length l = 150 mm
Result: Permissible
Transverse force F_q = 9.5 N
Lever arm s = 84 mm

Example 2:
Transverse force F_q = 40 N
Result: Permissible
Stroke length l = 28 mm
Lever arm s = 20 mm

Example 3:
Stroke length l = 150 mm
Lever arm s = 100 mm
$$F_q = \frac{\text{Max. torque } 800 \text{ Nmm}}{\text{Lever arm } 100 \text{ mm}} = 8 \text{ N}$$

Result: Permissible
 $F_q = 8 \text{ N} < F_{q\text{max.}} = 9.5 \text{ N}$



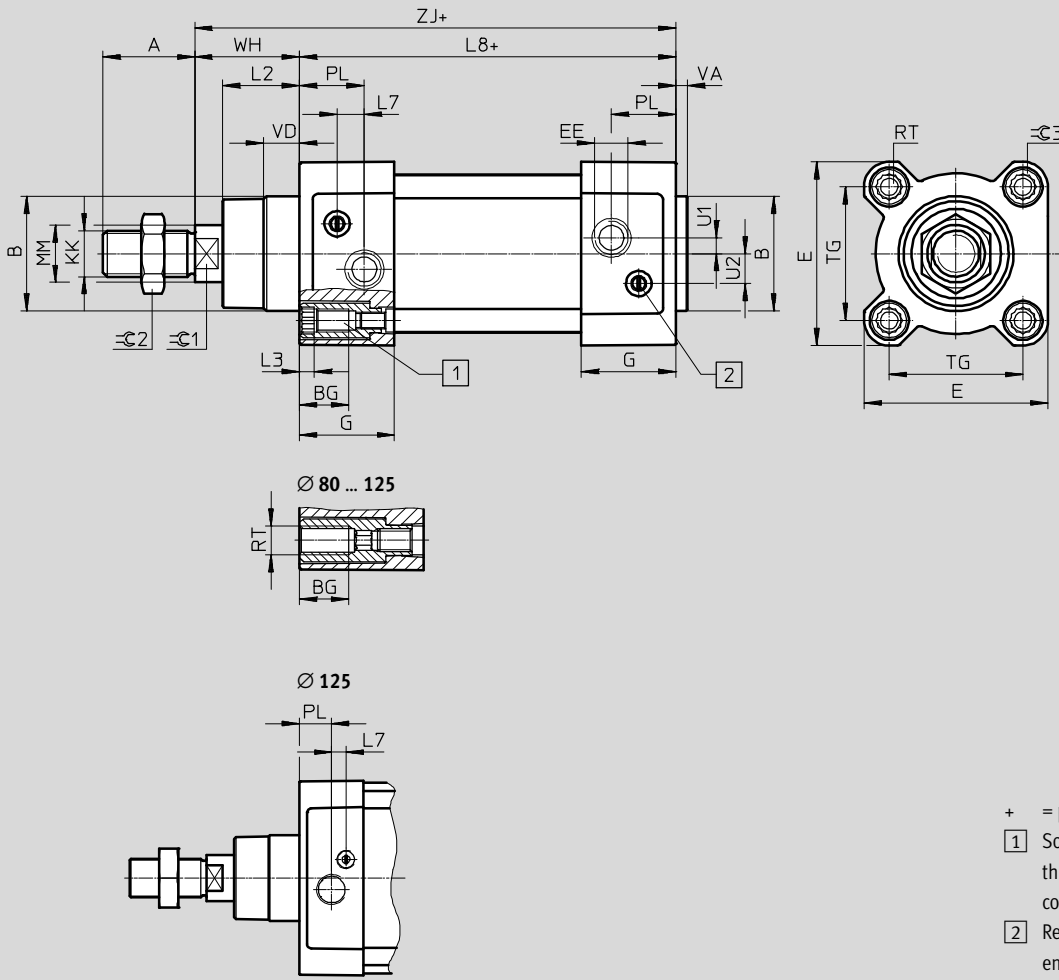
Standards-based cylinders DSBG, to ISO 15552

Technical data

FESTO

Dimensions

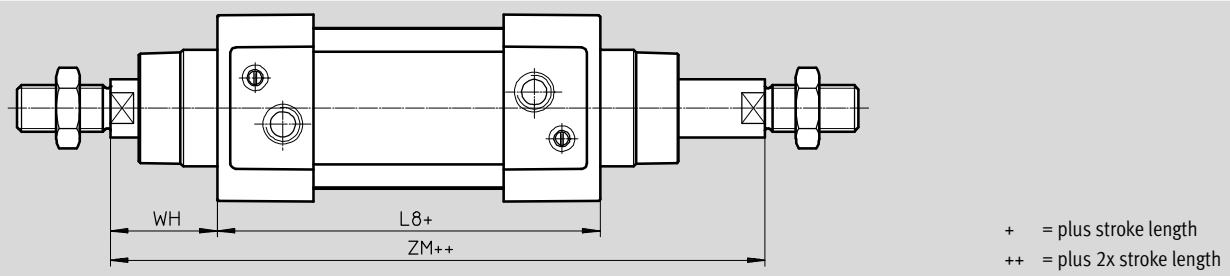
Download CAD data → www.festo.com



- + = plus stroke length
- 1 Socket head screw with female thread for mounting components
- 2 Regulating screw for adjustable end-position cushioning (PPV)

Variant

T – Through piston rod



Standards-based cylinders DSBG, to ISO 15552

Technical data

| ∅ [mm] | A -0.5 | B ∅ d11 | BG min. | E +0.5 | EE | G -0.2 | L2 | L3 Max. |
|-----------|-----------|---------------|------------|-----------|------|-----------|----------------------|------------|
| 32 | 22 | 30 | 16 | 45 | G1/8 | 28 | 18 _{-0.2} | 5 |
| 40 | 24 | 35 | 16 | 54 | G1/4 | 33 | 21.3 _{-0.2} | 5 |
| 50 | 32 | 40 | 16 | 64 | G1/4 | 33 | 26.8 _{-0.2} | 5 |
| 63 | 32 | 45 | 16 | 75 | G3/8 | 40.5 | 27 _{-0.2} | 5 |
| 80 | 40 | 45 | 17 | 93 | G3/8 | 43 | 34.2 _{-0.2} | - |
| 100 | 40 | 55 | 17 | 110 | G1/2 | 48 | 38 _{-0.2} | - |
| 125 | 54 | 60 | 20 | 136 | G1/2 | 44.7 | 45 _{-0.3} | - |

| ∅ [mm] | L7 | L8 ±0.4 | MM ∅ | PL ±0.1 | RT | TG ±0.3 | U1 ±0.1 | U2 ±0.1 |
|-----------|-----|------------|---------|------------|-----|------------|------------|------------|
| 32 | 6.5 | 94 | 12 | 19.5 | M6 | 32.5 | 5.25 | 5.7 |
| 40 | 7.5 | 105 | 16 | 22.5 | M6 | 38 | 4 | 8 |
| 50 | 9.5 | 106 | 20 | 22.5 | M8 | 46.5 | 5.5 | 10.4 |
| 63 | 9 | 121 | 20 | 27.5 | M8 | 56.5 | 6.25 | 12.75 |
| 80 | 11 | 128 | 25 | 30 | M10 | 72 | 8 | 12.5 |
| 100 | 7.5 | 138 | 25 | 31.5 | M10 | 89 | 10 | 13.5 |
| 125 | 10 | 160 | 32 | 22.5 | M12 | 110 | 8 | 13 |

| ∅ [mm] | VA | VD +0.5 | WH +2.2 | ZJ +1.8 | ZM +1 | ≈C1 | ≈C2 | ≈C3 |
|-----------|-------------------|------------|------------|------------|----------|-----|-----|-----|
| 32 | 4 _{-0.2} | 10 | 25 | 119.1 | 146.1 | 10 | 16 | 6 |
| 40 | 4 _{-0.2} | 10.5 | 28.7 | 133.9 | 164.8 | 13 | 18 | 6 |
| 50 | 4 _{-0.2} | 11.5 | 35.6 | 141.8 | 179.8 | 17 | 24 | 8 |
| 63 | 4 _{-0.2} | 15 | 35.9 | 157.1 | 195.4 | 17 | 24 | 8 |
| 80 | 4 _{-0.2} | 15.7 | 45.4 | 173.6 | 221 | 22 | 30 | 6 |
| 100 | 4 _{-0.2} | 19.2 | 49.3 | 187.5 | 238.8 | 22 | 30 | 6 |
| 125 | 6 _{-0.3} | 20.5 | 64.1 | 225 | 290 | 27 | 41 | 8 |

| ∅ [mm] | KK | |
|-----------|----------|---------------------------------|
| | DSBG-... | -M... |
| 32 | M10x1.25 | - |
| 40 | M12x1.25 | - |
| 50 | M16x1.5 | - |
| 63 | M16x1.5 | - |
| 80 | M20x1.5 | M16/M16x1.5/M20 |
| 100 | M20x1.5 | M16/M16x1.5/M20 |
| 125 | M27x2 | M16/M16x1.5/M20/M20x1.5/M24/M27 |

Standards-based cylinders DSBG, to ISO 15552

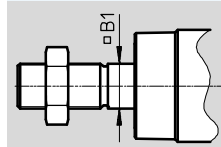
Technical data


FESTO

Dimensions – Variants

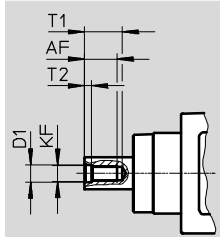
Download CAD data → www.festo.com


Q – With protection against rotation



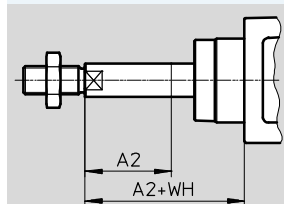
-  - Note
In combination with variant T, the piston rod is protected against rotation at one end.


F – Female thread



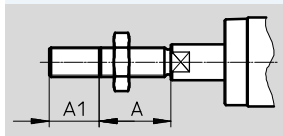
-  - Note
In combination with variant T, the piston rod has female threads at both ends.


...E – Piston rod extension



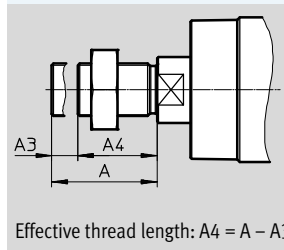
-  - Note
Piston rod extension at one end in combination with the variant T. Piston rod extension only at the square piston rod in combination with the variant T and Q.


...L – Piston rod thread extension



-  - Note
In combination with variant T, the piston rod thread is extended at both ends.

...S – Piston rod thread shortening



-  - Note
Piston rod is shortened at both ends in combination with variant T.

Effective thread length: $A4 = A - A3$

| ∅ | A | A1 | | A2 | | A3 | |
|-----|----|------|------|------|------|------|------|
| | | Min. | Max. | Min. | Max. | Min. | Max. |
| 32 | 22 | 1 | 35 | 1 | 500 | – | – |
| 40 | 24 | 1 | 35 | 1 | 500 | – | – |
| 50 | 32 | 1 | 70 | 1 | 500 | – | – |
| 63 | 32 | 1 | 70 | 1 | 500 | – | – |
| 80 | 40 | 1 | 70 | 1 | 500 | 1 | 30 |
| 100 | 40 | 1 | 70 | 1 | 500 | 1 | 30 |
| 125 | 54 | 1 | 70 | 1 | 500 | 1 | 44 |

| ∅ | AF | B1 | D1 | KF | T1 | T2 | WH |
|-----|------|----|------|-----|------|-----|------|
| | Min. | | | | Max. | | |
| 32 | 12 | 10 | 6.4 | M6 | 16 | 2.6 | 25 |
| 40 | 12 | 12 | 8.4 | M8 | 16 | 3.3 | 28.7 |
| 50 | 16 | 16 | 10.5 | M10 | 21 | 4.7 | 35.6 |
| 63 | 16 | 16 | 10.5 | M10 | 21 | 4.7 | 35.9 |
| 80 | 20 | 20 | 13 | M12 | 26.5 | 6.1 | 45.4 |
| 100 | 20 | 20 | 13 | M12 | 26.5 | 6.1 | 49.3 |
| 125 | 32 | – | 17 | M16 | 40 | 8 | 64.1 |

Standards-based cylinders DSBG, to ISO 15552

Technical data

Dimensions – Variants

Download CAD data → www.festo.com

...V – Swivel mounting position

Note

The dimensions for the swivel mounting position (...V) refer to the basic design without piston rod extension.

The swivel mounting can be moved at any time.

+ = plus stroke length
+1/2 = plus half stroke length

| ∅ | TD | TK | TL | TM | UW | XG | XJ | XV |
|------|---------|----|-----|-----|-----|-----------|-----------|-----------|
| [mm] | ∅ e9 | | h14 | h14 | | Min. | Max. | |
| 32 | 12 | 20 | 12 | 50 | 65 | 64±1.4 | 81±1.4 | 73±1.4 |
| 40 | 16 | 25 | 16 | 63 | 72 | 74.2±1.4 | 88.4±1.4 | 81.2±1.4 |
| 50 | 16 | 28 | 16 | 75 | 86 | 82.6±1.4 | 94.8±1.4 | 88.6±1.4 |
| 63 | 20 | 30 | 20 | 90 | 98 | 91.4±1.8 | 101.6±1.8 | 96.4±1.8 |
| 80 | 20 | 32 | 20 | 110 | 110 | 104.4±1.8 | 114.6±1.8 | 109.4±1.8 |
| 100 | 25 | 38 | 25 | 132 | 136 | 116.3±1.8 | 120.5±1.8 | 118.3±1.8 |
| 125 | 25 | 44 | 25 | 160 | 160 | 131.7±1.8 | 158.3±1.8 | 145±1.8 |

...LB2/-LB3 – Thread length of spacer bolts

1 = DSBC-...-LB2 (on the bearing cap)
2 = DSBC-...-LB3 (on the end cap)

| ∅ | ZL2 | |
|------|------|------|
| | Min. | Max. |
| [mm] | | |
| 80 | 20 | 140 |
| 100 | 20 | 140 |
| 125 | 24 | 140 |

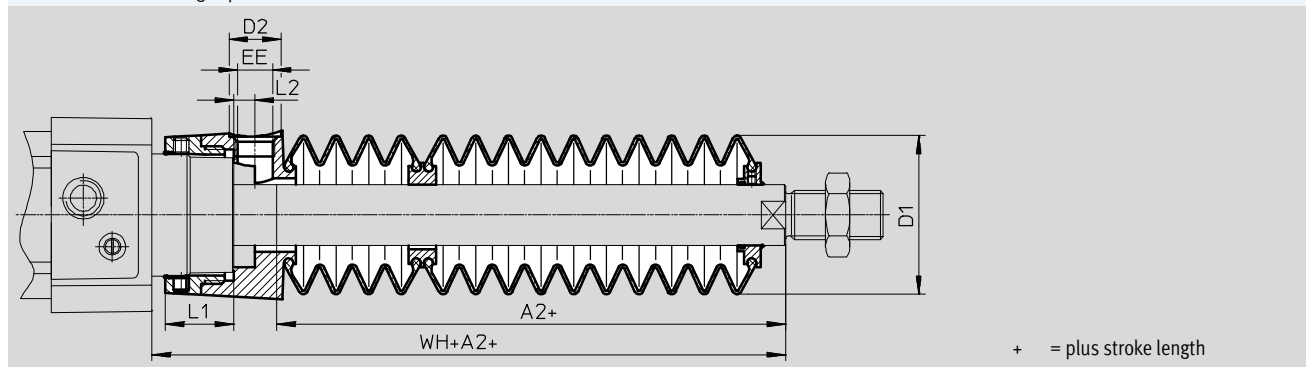
Standards-based cylinders DSBG, to ISO 15552



Technical data

Dimensions – Variants Download CAD data → www.festo.com

P2 – Bellows on bearing cap



| Ø Stroke [mm] | 32 | | | | | | | 40 | | | | | | |
|---------------------|------------------|------------|----|------|------|-----|-------|------------------|------------|----|------|------|-----|-------|
| | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 50 | 29 | 38 | 14 | G1/8 | 12.9 | 5.4 | 55 | 28 | 46 | 14 | G1/8 | 16.3 | 5.4 | 56.7 |
| 51 ... 125 | 47 | | | | | | 73 | 43 | | | | | | 71.7 |
| 126 ... 175 | 61 | | | | | | 87 | 56 | | | | | | 84.7 |
| 176 ... 250 | 80 | | | | | | 106 | 72 | | | | | | 100.7 |
| 251 ... 300 | 96 | | | | | | 122 | 86 | | | | | | 114.7 |
| 301 ... 350 | 112 | | | | | | 138 | 100 | | | | | | 128.7 |
| 351 ... 375 | 114 | | | | | | 140 | 101 | | | | | | 129.7 |
| 376 ... 425 | 130 | | | | | | 156 | 115 | | | | | | 143.7 |
| 426 ... 475 | 145 | | | | | | 171 | 130 | | | | | | 158.7 |
| 476 ... 500 | 147 | | | | | | 173 | 131 | | | | | | 159.7 |

| Ø Stroke [mm] | 50 | | | | | | | 63 | | | | | | |
|---------------------|------------------|------------|----|------|-------|----|-------|------------------|------------|----|------|------|----|-------|
| | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 50 | 28 | 57 | 17 | G1/4 | 22.35 | 7 | 63.6 | 28 | 57 | 17 | G1/4 | 22.4 | 7 | 63.9 |
| 51 ... 125 | 46 | | | | | | 81.6 | 46 | | | | | | 81.9 |
| 126 ... 175 | 56 | | | | | | 91.6 | 56 | | | | | | 91.9 |
| 176 ... 250 | 73 | | | | | | 108.6 | 73 | | | | | | 108.9 |
| 251 ... 300 | 86 | | | | | | 121.6 | 86 | | | | | | 121.9 |
| 301 ... 350 | 97 | | | | | | 132.6 | 97 | | | | | | 132.9 |
| 351 ... 375 | 105 | | | | | | 140.6 | 105 | | | | | | 140.9 |
| 376 ... 425 | 116 | | | | | | 151.6 | 116 | | | | | | 151.9 |
| 426 ... 475 | 126 | | | | | | 161.6 | 126 | | | | | | 161.9 |
| 476 ... 500 | 134 | | | | | | 169.6 | 134 | | | | | | 169.9 |


| Ø Stroke [mm] | 80 | | | | | | | 100 | | | | | | |
|---------------------|------------------|------------|----|------|----|----|-------|------------------|------------|----|------|----|----|-------|
| | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 50 | 25 | 93 | 17 | G1/4 | 28 | 4 | 70.4 | 25 | 93 | 17 | G1/4 | 28 | 4 | 74.3 |
| 51 ... 125 | 37 | | | | | | 82.4 | 37 | | | | | | 86.3 |
| 126 ... 175 | 49 | | | | | | 94.4 | 49 | | | | | | 98.3 |
| 176 ... 250 | 62 | | | | | | 107.4 | 62 | | | | | | 111.3 |
| 251 ... 300 | 74 | | | | | | 119.4 | 74 | | | | | | 123.3 |
| 301 ... 350 | 86 | | | | | | 131.4 | 86 | | | | | | 135.3 |
| 351 ... 375 | 87 | | | | | | 132.4 | 87 | | | | | | 136.3 |
| 376 ... 425 | 98 | | | | | | 143.4 | 98 | | | | | | 147.3 |
| 426 ... 475 | 110 | | | | | | 155.4 | 110 | | | | | | 159.3 |
| 476 ... 500 | 111 | | | | | | 156.4 | 111 | | | | | | 160.3 |

1) The dimension corresponds to the E value (piston rod extension) of the drive

Standards-based cylinders DSBG, to ISO 15552

Technical data

| Ordering data | | | | | |
|------------------------------|----------------|---------------------|---------------------|---------------------|---------------------|
| Piston \varnothing [mm] | Stroke [mm] | With PPV cushioning | | With PPS cushioning | |
| | | Part No. | Type | Part No. | Type |
| 32 | 25 | 1638842 | DSBG-32-25-PPVA-N3 | 1645460 | DSBG-32-25-PPSA-N3 |
| | 40 | 1638843 | DSBG-32-40-PPVA-N3 | 1645461 | DSBG-32-40-PPSA-N3 |
| | 50 | 1638844 | DSBG-32-50-PPVA-N3 | 1645462 | DSBG-32-50-PPSA-N3 |
| | 80 | 1638845 | DSBG-32-80-PPVA-N3 | 1645463 | DSBG-32-80-PPSA-N3 |
| | 100 | 1638846 | DSBG-32-100-PPVA-N3 | 1645464 | DSBG-32-100-PPSA-N3 |
| | 125 | 1638848 | DSBG-32-125-PPVA-N3 | 1645465 | DSBG-32-125-PPSA-N3 |
| | 160 | 1638849 | DSBG-32-160-PPVA-N3 | 1645466 | DSBG-32-160-PPSA-N3 |
| | 200 | 1638850 | DSBG-32-200-PPVA-N3 | 1645467 | DSBG-32-200-PPSA-N3 |
| | 250 | 1638851 | DSBG-32-250-PPVA-N3 | 1645468 | DSBG-32-250-PPSA-N3 |
| | 320 | 1638852 | DSBG-32-320-PPVA-N3 | 1645469 | DSBG-32-320-PPSA-N3 |
| | 400 | 1638853 | DSBG-32-400-PPVA-N3 | 1645470 | DSBG-32-400-PPSA-N3 |
| | 500 | 1638854 | DSBG-32-500-PPVA-N3 | 1645471 | DSBG-32-500-PPSA-N3 |
| | 1 ... 2800 | 1634781 | DSBG-32-...-PPVA-N3 | 1634560 | DSBG-32-...-PPSA-N3 |
| 40 | 25 | 1646547 | DSBG-40-25-PPVA-N3 | 1646559 | DSBG-40-25-PPSA-N3 |
| | 40 | 1646548 | DSBG-40-40-PPVA-N3 | 1646560 | DSBG-40-40-PPSA-N3 |
| | 50 | 1646549 | DSBG-40-50-PPVA-N3 | 1646561 | DSBG-40-50-PPSA-N3 |
| | 80 | 1646550 | DSBG-40-80-PPVA-N3 | 1646562 | DSBG-40-80-PPSA-N3 |
| | 100 | 1646551 | DSBG-40-100-PPVA-N3 | 1646563 | DSBG-40-100-PPSA-N3 |
| | 125 | 1646552 | DSBG-40-125-PPVA-N3 | 1646564 | DSBG-40-125-PPSA-N3 |
| | 160 | 1646553 | DSBG-40-160-PPVA-N3 | 1646565 | DSBG-40-160-PPSA-N3 |
| | 200 | 1646554 | DSBG-40-200-PPVA-N3 | 1646566 | DSBG-40-200-PPSA-N3 |
| | 250 | 1646555 | DSBG-40-250-PPVA-N3 | 1646567 | DSBG-40-250-PPSA-N3 |
| | 320 | 1646556 | DSBG-40-320-PPVA-N3 | 1646568 | DSBG-40-320-PPSA-N3 |
| | 400 | 1646557 | DSBG-40-400-PPVA-N3 | 1646569 | DSBG-40-400-PPSA-N3 |
| | 500 | 1646558 | DSBG-40-500-PPVA-N3 | 1646570 | DSBG-40-500-PPSA-N3 |
| | 1 ... 2800 | 1644503 | DSBG-40-...-PPVA-N3 | 1645473 | DSBG-40-...-PPSA-N3 |
| 50 | 25 | 1646709 | DSBG-50-25-PPVA-N3 | 1646723 | DSBG-50-25-PPSA-N3 |
| | 40 | 1646710 | DSBG-50-40-PPVA-N3 | 1646724 | DSBG-50-40-PPSA-N3 |
| | 50 | 1646711 | DSBG-50-50-PPVA-N3 | 1646725 | DSBG-50-50-PPSA-N3 |
| | 80 | 1646712 | DSBG-50-80-PPVA-N3 | 1646726 | DSBG-50-80-PPSA-N3 |
| | 100 | 1646713 | DSBG-50-100-PPVA-N3 | 1646727 | DSBG-50-100-PPSA-N3 |
| | 125 | 1646714 | DSBG-50-125-PPVA-N3 | 1646728 | DSBG-50-125-PPSA-N3 |
| | 160 | 1646715 | DSBG-50-160-PPVA-N3 | 1646729 | DSBG-50-160-PPSA-N3 |
| | 200 | 1646716 | DSBG-50-200-PPVA-N3 | 1646730 | DSBG-50-200-PPSA-N3 |
| | 250 | 1646717 | DSBG-50-250-PPVA-N3 | 1646731 | DSBG-50-250-PPSA-N3 |
| | 320 | 1646718 | DSBG-50-320-PPVA-N3 | 1646732 | DSBG-50-320-PPSA-N3 |
| | 400 | 1646719 | DSBG-50-400-PPVA-N3 | 1646733 | DSBG-50-400-PPSA-N3 |
| | 500 | 1646720 | DSBG-50-500-PPVA-N3 | 1646734 | DSBG-50-500-PPSA-N3 |
| | 1 ... 2800 | 1646708 | DSBG-50-...-PPVA-N3 | 1646722 | DSBG-50-...-PPSA-N3 |


 Note
Other variants in the modular product system → page 24

Standards-based cylinders DSBG, to ISO 15552

FESTO

Technical data

| Ordering data | | | | | |
|------------------|----------------|---------------------|----------------------|---------------------|----------------------|
| Piston Ø [mm] | Stroke [mm] | With PPV cushioning | | With PPS cushioning | |
| | | Part No. | Type | Part No. | Type |
| 63 | 25 | 1646740 | DSBG-63-25-PPVA-N3 | 1646754 | DSBG-63-25-PPSA-N3 |
| | 40 | 1646741 | DSBG-63-40-PPVA-N3 | 1646755 | DSBG-63-40-PPSA-N3 |
| | 50 | 1646742 | DSBG-63-50-PPVA-N3 | 1646756 | DSBG-63-50-PPSA-N3 |
| | 80 | 1646743 | DSBG-63-80-PPVA-N3 | 1646757 | DSBG-63-80-PPSA-N3 |
| | 100 | 1646744 | DSBG-63-100-PPVA-N3 | 1646758 | DSBG-63-100-PPSA-N3 |
| | 125 | 1646745 | DSBG-63-125-PPVA-N3 | 1646760 | DSBG-63-125-PPSA-N3 |
| | 160 | 1646746 | DSBG-63-160-PPVA-N3 | 1646761 | DSBG-63-160-PPSA-N3 |
| | 200 | 1646747 | DSBG-63-200-PPVA-N3 | 1646762 | DSBG-63-200-PPSA-N3 |
| | 250 | 1646748 | DSBG-63-250-PPVA-N3 | 1646763 | DSBG-63-250-PPSA-N3 |
| | 320 | 1646749 | DSBG-63-320-PPVA-N3 | 1646764 | DSBG-63-320-PPSA-N3 |
| | 400 | 1646750 | DSBG-63-400-PPVA-N3 | 1646765 | DSBG-63-400-PPSA-N3 |
| | 500 | 1646751 | DSBG-63-500-PPVA-N3 | 1646766 | DSBG-63-500-PPSA-N3 |
| | 1 ... 2800 | 1646739 | DSBG-63-...-PPVA-N3 | 1646753 | DSBG-63-...-PPSA-N3 |
| 80 | 25 | 1646771 | DSBG-80-25-PPVA-N3 | 1646785 | DSBG-80-25-PPSA-N3 |
| | 40 | 1646772 | DSBG-80-40-PPVA-N3 | 1646786 | DSBG-80-40-PPSA-N3 |
| | 50 | 1646773 | DSBG-80-50-PPVA-N3 | 1646787 | DSBG-80-50-PPSA-N3 |
| | 80 | 1646774 | DSBG-80-80-PPVA-N3 | 1646788 | DSBG-80-80-PPSA-N3 |
| | 100 | 1646775 | DSBG-80-100-PPVA-N3 | 1646789 | DSBG-80-100-PPSA-N3 |
| | 125 | 1646776 | DSBG-80-125-PPVA-N3 | 1646790 | DSBG-80-125-PPSA-N3 |
| | 160 | 1646777 | DSBG-80-160-PPVA-N3 | 1646791 | DSBG-80-160-PPSA-N3 |
| | 200 | 1646778 | DSBG-80-200-PPVA-N3 | 1646792 | DSBG-80-200-PPSA-N3 |
| | 250 | 1646779 | DSBG-80-250-PPVA-N3 | 1646793 | DSBG-80-250-PPSA-N3 |
| | 320 | 1646780 | DSBG-80-320-PPVA-N3 | 1646794 | DSBG-80-320-PPSA-N3 |
| | 400 | 1646781 | DSBG-80-400-PPVA-N3 | 1646795 | DSBG-80-400-PPSA-N3 |
| | 500 | 1646782 | DSBG-80-500-PPVA-N3 | 1646796 | DSBG-80-500-PPSA-N3 |
| | 1 ... 2800 | 1646770 | DSBG-80-...-PPVA-N3 | 1646784 | DSBG-80-...-PPSA-N3 |
| 100 | 25 | 1646801 | DSBG-100-25-PPVA-N3 | 1646815 | DSBG-100-25-PPSA-N3 |
| | 40 | 1646802 | DSBG-100-40-PPVA-N3 | 1646816 | DSBG-100-40-PPSA-N3 |
| | 50 | 1646803 | DSBG-100-50-PPVA-N3 | 1646817 | DSBG-100-50-PPSA-N3 |
| | 80 | 1646804 | DSBG-100-80-PPVA-N3 | 1646818 | DSBG-100-80-PPSA-N3 |
| | 100 | 1646805 | DSBG-100-100-PPVA-N3 | 1646819 | DSBG-100-100-PPSA-N3 |
| | 125 | 1646806 | DSBG-100-125-PPVA-N3 | 1646820 | DSBG-100-125-PPSA-N3 |
| | 160 | 1646807 | DSBG-100-160-PPVA-N3 | 1646821 | DSBG-100-160-PPSA-N3 |
| | 200 | 1646808 | DSBG-100-200-PPVA-N3 | 1646822 | DSBG-100-200-PPSA-N3 |
| | 250 | 1646809 | DSBG-100-250-PPVA-N3 | 1646823 | DSBG-100-250-PPSA-N3 |
| | 320 | 1646810 | DSBG-100-320-PPVA-N3 | 1646824 | DSBG-100-320-PPSA-N3 |
| | 400 | 1646811 | DSBG-100-400-PPVA-N3 | 1646825 | DSBG-100-400-PPSA-N3 |
| | 500 | 1646812 | DSBG-100-500-PPVA-N3 | 1646826 | DSBG-100-500-PPSA-N3 |
| | 1 ... 2800 | 1646800 | DSBG-100-...-PPVA-N3 | 1646814 | DSBG-100-...-PPSA-N3 |

 Note
Other variants in the modular product system → page 24

Standards-based cylinders DSBG, to ISO 15552

Technical data

| Ordering data | | | | | |
|------------------------------|----------------|---------------------|----------------------|---------------------|----------------------|
| Piston \varnothing [mm] | Stroke [mm] | With PPV cushioning | | With PPS cushioning | |
| | | Part No. | Type | Part No. | Type |
| 125 | 25 | 2159622 | DSBG-125-25-PPVA-N3 | 2159907 | DSBG-125-25-PPSA-N3 |
| | 40 | 2159623 | DSBG-125-40-PPVA-N3 | 2159908 | DSBG-125-40-PPSA-N3 |
| | 50 | 2159624 | DSBG-125-50-PPVA-N3 | 2159909 | DSBG-125-50-PPSA-N3 |
| | 80 | 2159625 | DSBG-125-80-PPVA-N3 | 2159910 | DSBG-125-80-PPSA-N3 |
| | 100 | 2159626 | DSBG-125-100-PPVA-N3 | 2159911 | DSBG-125-100-PPSA-N3 |
| | 125 | 2159627 | DSBG-125-125-PPVA-N3 | 2159912 | DSBG-125-125-PPSA-N3 |
| | 160 | 2159628 | DSBG-125-160-PPVA-N3 | 2159913 | DSBG-125-160-PPSA-N3 |
| | 200 | 2159629 | DSBG-125-200-PPVA-N3 | 2159915 | DSBG-125-200-PPSA-N3 |
| | 250 | 2159630 | DSBG-125-250-PPVA-N3 | 2159916 | DSBG-125-250-PPSA-N3 |
| | 320 | 2159631 | DSBG-125-320-PPVA-N3 | 2159917 | DSBG-125-320-PPSA-N3 |
| | 400 | 2159632 | DSBG-125-400-PPVA-N3 | 2159918 | DSBG-125-400-PPSA-N3 |
| | 500 | 2159633 | DSBG-125-500-PPVA-N3 | 2159919 | DSBG-125-500-PPSA-N3 |
| | 1 ... 2800 | 2158455 | DSBG-125-...-PPVA-N3 | 2158471 | DSBG-125-...-PPSA-N3 |

 Note

Other variants in the modular product system → page 24

Standards-based cylinders DSBG, to ISO 15552

Ordering data – Modular product system



| Ordering table | | | | | | | | | | |
|--------------------------------------|---|-------------------------------------|---------|---------|---------|---------|---------|-----------------|------|---------------|
| Size | 32 | 40 | 50 | 63 | 80 | 100 | 125 | Condi- tions | Code | Entry code |
| M Module no. | 1634484 | 1645477 | 1646707 | 1646738 | 1646769 | 1646799 | 2045493 | | | |
| Function | Standards-based cylinder, double-acting, based on ISO 15552 | | | | | | | | DSBG | DSBG |
| O Protection against rotation | None | | | | | | | | | |
| | With protection against rotation | | | | | | | 1 | -Q | |
| Running characteristics | Standard | | | | | | | | | |
| | Low friction | | | | | | | 2 | L | |
| | Constant, slow movement | | | | | | | 2 | U | |
| | Low friction for balancer applications | | | | | | | 3 | L1 | |
| M Piston Ø [mm] | 32 | 40 | 50 | 63 | 80 | 100 | 125 | | -... | |
| Stroke [mm] | 1 ... 2800 | | | | | | | | -... | |
| O Piston rod | At one end | | | | | | | | | |
| | Through piston rod | | | | | | | | -T | |
| Piston rod thread type | Male thread | | | | | | | | | |
| | Female thread | | | | | | | 4 | F | |
| M Cushioning | Elastic cushioning rings/pads at both ends | | | | | | | | -P | |
| | Pneumatic cushioning, self-adjusting at both ends | | | | | | | 5 | -PPS | |
| | Pneumatic cushioning, adjustable at both ends | | | | | | | | -PPV | |
| Position sensing | For proximity sensor | | | | | | | | A | A |
| O Standard | Based on ISO 15552 | | | | | | | | | |
| | Corresponds to ISO 15552 | | | | | | | | -N3 | |
| Corrosion protection | Standard | | | | | | | | | |
| | High corrosion protection | | | | | | | 6 | R3 | |
| Temperature range | Standard | | | | | | | | | |
| | [°C] | Heat-resistant seals up to max. 120 | | | | | | 7 | T1 | |
| | [°C] | -40 ... +80 | | | | | | 7 | T3 | |
| | [°C] | 0 ... +150 | | | | | | 7 | T4 | |

1 Q Not with L, U, N3, T3, T4, P2, A2, A3, A6
Only up to stroke of 1500 mm

2 L, U Not with T, R3, T1, T3, T4, P2, A2, A3, A6, EX4

3 L1 Not with T, PPV, R3, T1, T3, T4, P2, A2, A3, A6, EX4

4 F Not with ...L, M...

5 PPS Not with T1, T3, T4

6 R3 Not with A2, A6, ...V

7 T1, T3, T4 Not with P2, A2, A3, EX4

- Note
If feature L is used in combination with transverse loads or strokes of above 500 mm, suitable measures must be taken to support the piston rod.
The operating pressure (→ page 11) is applicable for strokes up to 500 mm.

- Note
If feature L1 is used in combination with strokes of above 500 mm, suitable measures must be taken to support the piston rod.
The operating pressure (→ page 11) is applicable for strokes up to 500 mm.

- M** Mandatory data
- O** Options


Transfer order code


Standards-based cylinders DSBG, to ISO 15552


Ordering data – Modular products


| Ordering table | | | | | | | | | | |
|-----------------------------------|-----------------------------------|----|----|------------|--------------------|------------|------------|-----------------|------|---------------|
| Size | 32 | 40 | 50 | 63 | 80 | 100 | 125 | Condi- tions | Code | Entry code |
| Protection against particles | Standard | | | | | | | | | |
| | Protective bellows on bearing cap | | | | | | | - | [8] | P2 |
| Scraper variant | None | | | | | | | | | |
| | Hard scraper | | | | | | | | | A2 |
| | For unlubricated operation | | | | | | | | | A3 |
| | Metal scraper | | | | | | | | | A6 |
| EU certification | None | | | | | | | | | |
| | II 2GD | | | | | | | | [9] | EX4 |
| Swivel mounting position [mm] | None | | | | | | | | | |
| | 0 ... 2800 | | | | | | | | | -...V |
| Piston rod extension [mm] | None | | | | | | | | | |
| | 1 ... 500 | | | | | | | | [10] | -...E |
| Piston rod thread extension [mm] | None | | | | | | | | | |
| | 1 ... 35 | | | 1 ... 70 | | | | | [10] | -...L |
| Piston rod thread shortening [mm] | None | | | | | | | | | |
| | - | | | | 1 ... 30 | | 1 ... 44 | | | -...S |
| Piston rod thread | Standard (→ page 17) | | | | | | | | | |
| | - | | | | M16 | | | | | -M16 |
| | - | | | | M16x1.5 | | | | | -M16P |
| | - | | | | M20 | | | | | -M20 |
| | - | | | | - | | M20x1.5 | | | -M20P |
| | - | | | | - | | M24 | | | -M24 |
| - | | | | - | | M27 | | | -M27 | |
| Thread length [mm] | None | | | | | | | | | |
| | - | | | | On the bearing cap | | | | | -...LB2 |
| Spacer bolt | - | | | | 20 ... 140 | | 24 ... 140 | | | |
| | - | | | | On the end cap | | | | | -...LB3 |
| - | | | | 20 ... 140 | | 24 ... 140 | | | | |

- [8] P2 Not with N3, A2, A3, A6, EX4
Only for strokes 10 ... 500 mm
- [9] EX4 Not with T1, T3, T4, P2, A3, A6, ...LB2, ...LB3
- [10] ...E, ...L Only up to strokes of 2000 mm

 - Note
The piston rod extension for the bellows is automatically taken into consideration when feature P2 is selected. This means that there is no need to specify a value for feature ...E.

 - Note
When selecting feature ...E in combination with feature P2, the part of the piston rod extension ...E is not covered by the bellows.

 - Note
When feature P2 is selected in combination with feature T (through piston rod), the bellows is mounted at one end only.

 - Note
If a thread smaller than the standard thread is selected for feature M... (piston rod thread), this may reduce the load capacity.

- [M] Mandatory data
- [O] Options

Transfer order code

[] - [] - [] - [] - [] - [] - [] - []

Standards-based cylinders DSBG, to ISO 15552

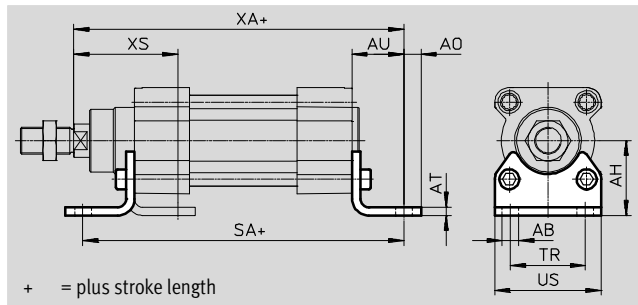


Accessories

Foot mounting HNC/CRHNC

Materials:

- HNC: Galvanised steel
- CRHNC: High-alloy steel
- Free of copper and PTFE



| Dimensions and ordering data | | | | | | | | | | |
|------------------------------|---------------------|----|------|----|----|-----|----|-----|-------|------|
| For \varnothing | AB \varnothing | AH | AO | AT | AU | SA | TR | US | XA | XS |
| [mm] | | | | | | | | | | |
| 32 | 7 | 32 | 6.5 | 4 | 24 | 142 | 32 | 45 | 143.1 | 46 |
| 40 | 10 | 36 | 9 | 4 | 28 | 161 | 36 | 54 | 161.9 | 52.7 |
| 50 | 10 | 45 | 9.5 | 5 | 32 | 170 | 45 | 64 | 173.8 | 62.6 |
| 63 | 10 | 50 | 12.5 | 5 | 32 | 185 | 50 | 75 | 189.1 | 62.9 |
| 80 | 12 | 63 | 15 | 6 | 41 | 210 | 63 | 93 | 214.6 | 80.4 |
| 100 | 14.5 | 71 | 17.5 | 6 | 41 | 220 | 75 | 110 | 228.5 | 84.3 |
| 125 | 16.5 | 90 | 22 | 8 | 45 | 250 | 90 | 131 | 270 | 102 |

| For \varnothing | Basic design | | | | Corrosion resistant | | | |
|-------------------|-------------------|------------|---------------|--------------------|---------------------|------------|---------------|--------------------|
| | CRC ¹⁾ | Weight [g] | Part No. | Type ²⁾ | CRC ¹⁾ | Weight [g] | Part No. | Type ²⁾ |
| [mm] | | | | | | | | |
| 32 | 2 | 144 | 174369 | HNC-32 | 4 | 139 | 176937 | CRHNC-32 |
| 40 | 2 | 193 | 174370 | HNC-40 | 4 | 188 | 176938 | CRHNC-40 |
| 50 | 2 | 353 | 174371 | HNC-50 | 4 | 341 | 176939 | CRHNC-50 |
| 63 | 2 | 436 | 174372 | HNC-63 | 4 | 424 | 176940 | CRHNC-63 |
| 80 | 2 | 829 | 174373 | HNC-80 | 4 | 809 | 176941 | CRHNC-80 |
| 100 | 2 | 1009 | 174374 | HNC-100 | 4 | 990 | 176942 | CRHNC-100 |
| 125 | 2 | 1902 | 174375 | HNC-125 | 4 | 1920 | 176943 | CRHNC-125 |

- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
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, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.
- 2) Suitable for ATEX

Standards-based cylinders DSBG, to ISO 15552

Accessories

Flange mounting FNC/CRFNG

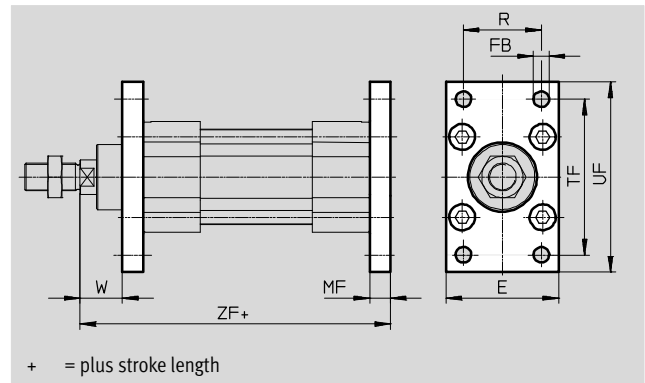
Materials:

FNC: Galvanised steel

CRFNG: High-alloy steel

Free of copper and PTFE

RoHS compliant



| Dimensions and ordering data | | | | | | | | |
|------------------------------|-----|----------|----|----|-----|-----|------|-------|
| For Ø | E | FB | MF | R | TF | UF | W | ZF |
| [mm] | | Ø H13 | | | | | | |
| 32 | 45 | 7 | 10 | 32 | 64 | 80 | 16 | 129.1 |
| 40 | 54 | 9 | 10 | 36 | 72 | 90 | 18.7 | 143.9 |
| 50 | 65 | 9 | 12 | 45 | 90 | 110 | 23.6 | 153.8 |
| 63 | 75 | 9 | 12 | 50 | 100 | 120 | 23.9 | 169.1 |
| 80 | 93 | 12 | 16 | 63 | 126 | 150 | 29.4 | 189.6 |
| 100 | 110 | 14 | 16 | 75 | 150 | 175 | 33.3 | 203.5 |
| 125 | 132 | 16 | 20 | 90 | 180 | 210 | 45 | 245 |

| For Ø | Basic design | | | | Corrosion resistant | | | |
|-------|-------------------|--------|---------------|--------------------|---------------------|--------|---------------|--------------------|
| | CRC ¹⁾ | Weight | Part No. | Type ²⁾ | CRC ¹⁾ | Weight | Part No. | Type ²⁾ |
| [mm] | | [g] | | | | [g] | | |
| 32 | 1 | 221 | 174376 | FNC-32 | 4 | 220 | 161846 | CRFNG-32 |
| 40 | 1 | 291 | 174377 | FNC-40 | 4 | 291 | 161847 | CRFNG-40 |
| 50 | 1 | 536 | 174378 | FNC-50 | 4 | 526 | 161848 | CRFNG-50 |
| 63 | 1 | 679 | 174379 | FNC-63 | 4 | 680 | 161849 | CRFNG-63 |
| 80 | 1 | 1495 | 174380 | FNC-80 | 4 | 1508 | 161850 | CRFNG-80 |
| 100 | 1 | 2041 | 174381 | FNC-100 | 4 | 2054 | 161851 | CRFNG-100 |
| 125 | 1 | 3775 | 174382 | FNC-125 | 4 | 3787 | 185363 | CRFNG-125 |

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

Low corrosion stress. For dry indoor applications 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, for instance in the chemical or food industries. These applications may need to be supported by special tests (➔ also FN 940082) using appropriate media.

2) Suitable for ATEX

Standards-based cylinders DSBG, to ISO 15552



Accessories

Trunnion flange ZNCF/CRZNG

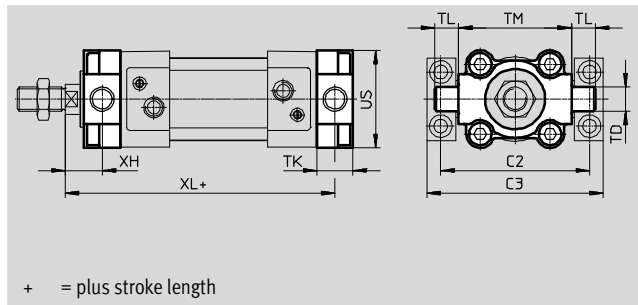
Materials:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel casting

Free of copper and PTFE

RoHS compliant



+ = plus stroke length

Dimensions and ordering data

| For \varnothing [mm] | C2 | C3 | TD \varnothing e9 | TK | TL | TM | US | XH | XL |
|---------------------------|-----|-----|---------------------------|----|----|-----|-----|------|-------|
| 32 | 71 | 86 | 12 | 16 | 12 | 50 | 45 | 18 | 127.1 |
| 40 | 87 | 105 | 16 | 20 | 16 | 63 | 54 | 18.7 | 143.9 |
| 50 | 99 | 117 | 16 | 24 | 16 | 75 | 64 | 23.6 | 153.8 |
| 63 | 116 | 136 | 20 | 24 | 20 | 90 | 75 | 23.9 | 169.1 |
| 80 | 136 | 156 | 20 | 28 | 20 | 110 | 93 | 31.4 | 187.6 |
| 100 | 164 | 189 | 25 | 38 | 25 | 132 | 110 | 30.3 | 206.5 |
| 125 | 192 | 217 | 25 | 50 | 25 | 160 | 131 | 40 | 250 |

| For \varnothing [mm] | Basic design | | | | Corrosion resistant | | | |
|---------------------------|-------------------|---------------|---------------|--------------------|---------------------|---------------|---------------|--------------------|
| | CRC ¹⁾ | Weight [g] | Part No. | Type ²⁾ | CRC ¹⁾ | Weight [g] | Part No. | Type ²⁾ |
| 32 | 2 | 150 | 174411 | ZNCF-32 | 4 | 150 | 161852 | CRZNG-32 |
| 40 | 2 | 285 | 174412 | ZNCF-40 | 4 | 285 | 161853 | CRZNG-40 |
| 50 | 2 | 473 | 174413 | ZNCF-50 | 4 | 473 | 161854 | CRZNG-50 |
| 63 | 2 | 687 | 174414 | ZNCF-63 | 4 | 687 | 161855 | CRZNG-63 |
| 80 | 2 | 1296 | 174415 | ZNCF-80 | 4 | 1296 | 161856 | CRZNG-80 |
| 100 | 2 | 2254 | 174416 | ZNCF-100 | 4 | 2254 | 161857 | CRZNG-100 |
| 125 | 2 | 3484 | 174417 | ZNCF-125 | 4 | 3484 | 185362 | CRZNG-125 |

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

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, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

2) Suitable for ATEX

Standards-based cylinders DSBG, to ISO 15552

Accessories

Trunnion support LNZG

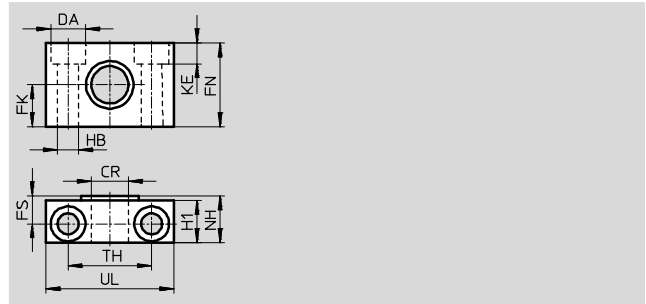
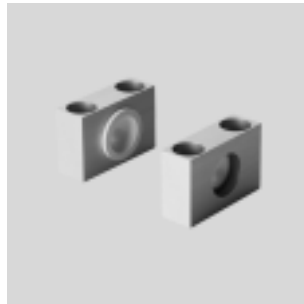
Materials:

Trunnion support: Anodised aluminium

Plain bearing: Plastic

Free of copper and PTFE

RoHS compliant



| Dimensions and ordering data | | | | | | | | | | | | | | | |
|------------------------------|---------------|---------------|---------------|----|------|------|---------------|-----|------|-----------|----|-------------------|--------|--------------|---------------------|
| For \varnothing | CR | DA | FK | FN | FS | H1 | HB | KE | NH | TH | UL | CRC ¹⁾ | Weight | Part No. | Type |
| [mm] | \varnothing | \varnothing | \varnothing | | | | \varnothing | | | ± 0.2 | | | [g] | | |
| 32 | 12 | 11 | 15 | 30 | 10.5 | 15 | 6.6 | 6.8 | 18 | 32 | 46 | 2 | 83 | 32959 | LNZG-32 |
| 40, 50 | 16 | 15 | 18 | 36 | 12 | 18 | 9 | 9 | 21 | 36 | 55 | 2 | 129 | 32960 | LNZG-40/50 |
| 63, 80 | 20 | 18 | 20 | 40 | 13 | 20 | 11 | 11 | 23 | 42 | 65 | 2 | 178 | 32961 | LNZG-63/80 |
| 100, 125 | 25 | 20 | 25 | 50 | 16 | 24.5 | 14 | 13 | 28.5 | 50 | 75 | 2 | 306 | 32962 | LNZG-100/125 |

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

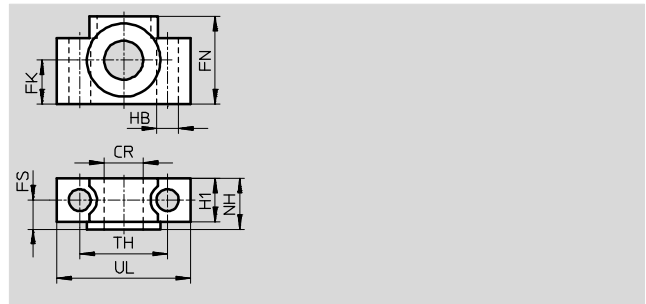
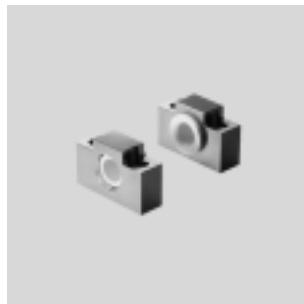
Trunnion support CRLNZG

Materials:

High-alloy steel

Free of copper and PTFE

RoHS compliant



| Dimensions and ordering data | | | | | | | | | | | | | | | |
|------------------------------|---------------|---------------|----|------|------|---------------|------|-----------|----|-------------------|--------|---------------|-----------------------|--|--|
| For \varnothing | CR | FK | FN | FS | H1 | HB | NH | TH | UL | CRC ¹⁾ | Weight | Part No. | Type | | |
| [mm] | \varnothing | \varnothing | | | | \varnothing | | ± 0.2 | | | [g] | | | | |
| 32 | 12 | 15 | 30 | 10.5 | 15 | 6.6 | 18 | 32 | 46 | 4 | 205 | 161874 | CRLNZG-32 | | |
| 40, 50 | 16 | 18 | 36 | 12 | 18 | 9 | 21 | 36 | 55 | 4 | 323 | 161875 | CRLNZG-40/50 | | |
| 63, 80 | 20 | 20 | 40 | 13 | 20 | 11 | 23 | 42 | 65 | 4 | 435 | 161876 | CRLNZG-63/80 | | |
| 100, 125 | 25 | 25 | 50 | 16 | 24.5 | 14 | 28.5 | 50 | 75 | 4 | 739 | 161877 | CRLNZG-100/125 | | |

1) 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, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

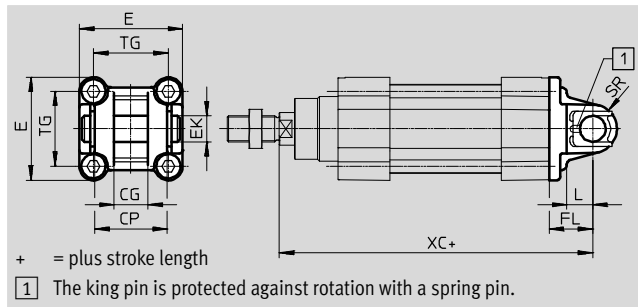
Standards-based cylinders DSBG, to ISO 15552



Accessories

Swivel flange SNC

Materials:
Die-cast aluminium
RoHS-compliant



| Dimensions and ordering data | | | | | | | | | | | | | |
|------------------------------|-----|-----|-------------------|---------------------|-----------|----|----|------|-------|-------------------|--------|---------------|--------------------|
| For \varnothing | CG | CP | E | EK \varnothing | FL | L | SR | TG | XC | CRC ¹⁾ | Weight | Part No. | Type ²⁾ |
| [mm] | H14 | h14 | | H9 | ± 0.2 | | | | | | [g] | | |
| 32 | 14 | 34 | $45^{+0.2/-0.5}$ | 10 | 22 | 13 | 10 | 32.5 | 141.1 | 1 | 93 | 174383 | SNC-32 |
| 40 | 16 | 40 | $54_{-0.5}$ | 12 | 25 | 16 | 12 | 38 | 158.9 | 1 | 140 | 174384 | SNC-40 |
| 50 | 21 | 45 | $64_{-0.6}$ | 16 | 27 | 16 | 12 | 46.5 | 168.8 | 1 | 234 | 174385 | SNC-50 |
| 63 | 21 | 51 | $75_{-0.6}$ | 16 | 32 | 21 | 16 | 56.5 | 189.1 | 1 | 331 | 174386 | SNC-63 |
| 80 | 25 | 65 | $93_{-0.8}$ | 20 | 36 | 22 | 16 | 72 | 209.6 | 1 | 618 | 174387 | SNC-80 |
| 100 | 25 | 75 | $110^{+0.3/-0.8}$ | 20 | 41 | 27 | 20 | 89 | 228.5 | 1 | 865 | 174388 | SNC-100 |
| 125 | 37 | 97 | $131_{-0.8}$ | 30 | 50 | 30 | 25 | 110 | 275 | 1 | 1728 | 174389 | SNC-125 |

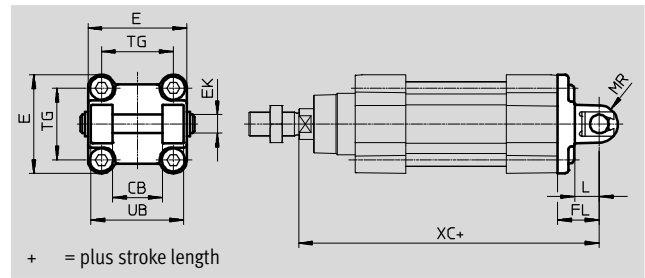
- 1) Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).
- 2)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

Standards-based cylinders DSBG, to ISO 15552

Accessories

Swivel flange SNCB/SNCB-...-R3

Materials:
 SNCB: Die-cast aluminium
 SNCB-...-R3: Die-cast aluminium with protective coating
 Free of copper and PTFE
 RoHS-compliant



| Dimensions and ordering data | | | | | | | | | |
|------------------------------|-----|--------------------------|------------|------|----|------|------|-----|-------|
| For Ø | CB | E | EK | FL | L | MR | TG | UB | XC |
| [mm] | H14 | | Ø H9/e8 | ±0.2 | | -0.5 | | h14 | |
| 32 | 26 | 45 ^{+0.2/-0.5} | 10 | 22 | 13 | 8.5 | 32.5 | 45 | 141.1 |
| 40 | 28 | 54 ^{-0.5} | 12 | 25 | 16 | 12 | 38 | 52 | 158.9 |
| 50 | 32 | 64 ^{-0.6} | 12 | 27 | 16 | 12 | 46.5 | 60 | 168.8 |
| 63 | 40 | 75 ^{-0.6} | 16 | 32 | 21 | 16 | 56.5 | 70 | 189.1 |
| 80 | 50 | 93 ^{-0.8} | 16 | 36 | 22 | 16 | 72 | 90 | 209.6 |
| 100 | 60 | 110 ^{+0.3/-0.8} | 20 | 41 | 27 | 20 | 89 | 110 | 228.5 |
| 125 | 70 | 131 ^{-0.8} | 25 | 50 | 30 | 25 | 110 | 130 | 275 |

| For Ø [mm] | Basic design | | | | R3 – High corrosion protection | | | |
|---------------|-------------------|------------|---------------|-----------------|--------------------------------|------------|---------------|--------------------|
| | CRC ¹⁾ | Weight [g] | Part No. | Type | CRC ¹⁾ | Weight [g] | Part No. | Type |
| 32 | 1 | 103 | 174390 | SNCB-32 | 3 | 100 | 176944 | SNCB-32-R3 |
| 40 | 1 | 155 | 174391 | SNCB-40 | 3 | 151 | 176945 | SNCB-40-R3 |
| 50 | 1 | 232 | 174392 | SNCB-50 | 3 | 228 | 176946 | SNCB-50-R3 |
| 63 | 1 | 375 | 174393 | SNCB-63 | 3 | 371 | 176947 | SNCB-63-R3 |
| 80 | 1 | 636 | 174394 | SNCB-80 | 3 | 632 | 176948 | SNCB-80-R3 |
| 100 | 1 | 1035 | 174395 | SNCB-100 | 3 | 986 | 176949 | SNCB-100-R3 |
| 125 | 1 | 1860 | 174396 | SNCB-125 | 3 | 1776 | 176950 | SNCB-125-R3 |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. For dry indoor applications 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 3 to Festo standard FN 940070
 High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

Standards-based cylinders DSBG, to ISO 15552



Accessories

Swivel flange

SNCS/CRSNCS/SNCS-...-R3

Materials:

SNCS 32 ... 50: Die-cast aluminium

SNCS 63 ... 125:

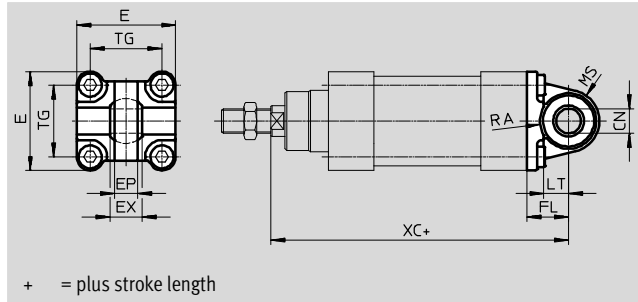
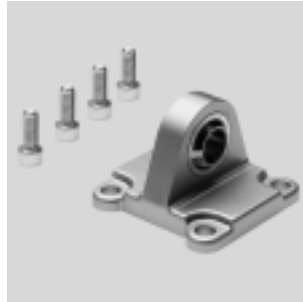
Wrought aluminium alloy

CRSNCS 32 ... 80:

High-alloy stainless steel

SNCS-...-R3: 100 ... 125: Wrought aluminium alloy with protective coating

RoHS-compliant



+ = plus stroke length

| Dimensions and ordering data | | | | | | | |
|------------------------------|----------------------|----------------------------|-------------------------|------------------------|-----------|----|-----------|
| For \varnothing | CN \varnothing | | E | | EP | EX | FL |
| [mm] | DSBG-... | DSBG-...-R3 | DSBG-... | DSBG-...-R3 | ± 0.2 | | ± 0.2 |
| 32 | 10 ^{+0.013} | 10 ^{+0.015/-0.04} | 45 ^{+0.2/-0.5} | 45 ^{-0.5} | 10.5 | 14 | 22 |
| 40 | 12 ^{+0.015} | 12 ^{+0.018/-0.04} | 54 ^{-0.5} | 54 ^{-0.5} | 12 | 16 | 25 |
| 50 | 16 ^{+0.015} | 16 ^{+0.018/-0.04} | 64 ^{-0.6} | 64 ^{-0.6} | 15 | 21 | 27 |
| 63 | 16 ^{+0.015} | 16 ^{+0.018/-0.04} | 74,5 ^{+0.5} | 75 ^{-0.6} | 15 | 21 | 32 |
| 80 | 20 ^{+0.018} | 20 ^{+0.021/-0.04} | 92,2 ^{+0.8} | 93 ^{-0.8} | 18 | 25 | 36 |
| 100 | 20 ^{+0.018} | 20 ^{+0.021/-0.04} | 109 ^{+1/-0.7} | 109 ^{+1/-0.7} | 18 | 25 | 41 |
| 125 | 30 ^{+0.018} | 30 ^{+0.021/-0.04} | 132 ^{+1/-0.7} | 132 ^{+1/-0.7} | 25 | 37 | 50 |

| For \varnothing | LT | MS | | RA | | TG | XC |
|-------------------|----|--------------------|--------------------|------------|-------------------|------|-------|
| [mm] | | DSBG | DSBG-...-R3 | DSBG +1 | DSBG-...-R3 +1 | | |
| 32 | 13 | 15 ^{+0.5} | 15 ^{+0.5} | 14.5 | 14.5 | 32.5 | 141.1 |
| 40 | 16 | 17 ^{+0.5} | 17 ^{+0.5} | 17.5 | 17.5 | 38 | 158.9 |
| 50 | 16 | 20 ^{+0.5} | 20 ^{+0.5} | 18.5 | 19 | 46.5 | 168.8 |
| 63 | 21 | 23 ^{-0.5} | 22 ^{+0.5} | 23 | 23 | 56.5 | 189.1 |
| 80 | 22 | 28 ^{-0.5} | 27 ^{+0.5} | 25 | 25 | 72 | 209.6 |
| 100 | 27 | 30 ± 0.5 | 30 ± 0.5 | 95 | 100 | 89 | 228.5 |
| 125 | 30 | 39 ± 0.5 | 39 ± 0.5 | 100 | 100 | 110 | 275 |

| For \varnothing | Basic version | | | | High corrosion protection | | | |
|-------------------|-------------------|---------------|---------------|-----------------|---------------------------|---------------|----------------|--------------------|
| | CRC ¹⁾ | Weight [g] | Part No. | Type | CRC ¹⁾ | Weight [g] | Part No. | Type |
| 32 | 1 | 86 | 174397 | SNCS-32 | 4 | 161 | 2895920 | CRSNCS-32 |
| 40 | 1 | 122 | 174398 | SNCS-40 | 4 | 239 | 2895921 | CRSNCS-40 |
| 50 | 1 | 216 | 174399 | SNCS-50 | 4 | 403 | 2895922 | CRSNCS-50 |
| 63 | 2 | 281 | 174400 | SNCS-63 | 4 | 576 | 2895923 | CRSNCS-63 |
| 80 | 2 | 557 | 174401 | SNCS-80 | 4 | 1173 | 2895924 | CRSNCS-80 |
| 100 | 2 | 683 | 174402 | SNCS-100 | 3 | 684 | 2895925 | SNCS-100-R3 |
| 125 | 2 | 1369 | 174403 | SNCS-125 | 3 | 1369 | 2895926 | SNCS-125-R3 |

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

Low corrosion stress. For dry indoor applications 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 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Corrosion resistance class CRC 3 to Festo standard FN 940070

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

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, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

Standards-based cylinders DSBG, to ISO 15552

Accessories

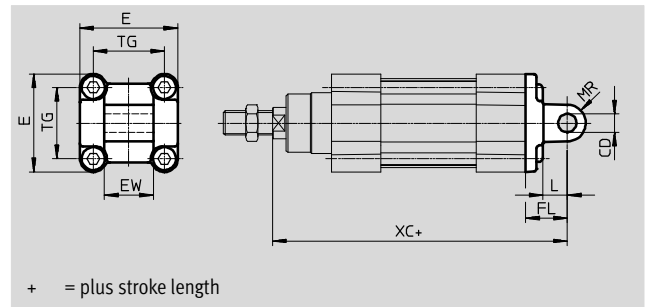
Swivel flange SNCL

Materials:

Die-cast aluminium

Free of copper and PTFE

RoHS-compliant



| Dimensions and ordering data | | | | | | | | | | | | |
|------------------------------|---------------------|--------------------------|-----|-----------|----|----|------|-------|-------------------|--------|---------------|-----------------|
| For \varnothing | CD | E | EW | FL | L | MR | TG | XC | CRC ¹⁾ | Weight | Part No. | Type |
| [mm] | \varnothing H9 | | h12 | ± 0.2 | | | | | | [g] | | |
| 32 | 10 | 45 ^{+0.2/-0.5} | 26 | 22 | 13 | 10 | 32.5 | 141.1 | 1 | 71 | 174404 | SNCL-32 |
| 40 | 12 | 54 ^{-0.5} | 28 | 25 | 16 | 12 | 38 | 158.9 | 1 | 95 | 174405 | SNCL-40 |
| 50 | 12 | 64 ^{-0.6} | 32 | 27 | 16 | 12 | 46.5 | 168.8 | 1 | 158 | 174406 | SNCL-50 |
| 63 | 16 | 75 ^{-0.6} | 40 | 32 | 21 | 16 | 56.5 | 189.1 | 1 | 225 | 174407 | SNCL-63 |
| 80 | 16 | 93 ^{-0.8} | 50 | 36 | 22 | 16 | 72 | 209.6 | 1 | 436 | 174408 | SNCL-80 |
| 100 | 20 | 110 ^{+0.3/-0.8} | 60 | 41 | 27 | 20 | 89 | 228.5 | 1 | 606 | 174409 | SNCL-100 |
| 125 | 25 | 131 ^{-0.8} | 70 | 50 | 30 | 25 | 110 | 275 | 1 | 1135 | 174410 | SNCL-125 |

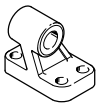
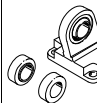
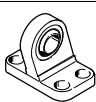
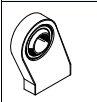
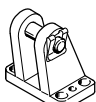
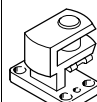
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. For dry indoor applications 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).

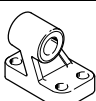
Standards-based cylinders DSBG, to ISO 15552

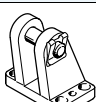
Accessories

FESTO

| Ordering data – Mounting components | | | | Technical data → Internet: clevis foot | | | |
|--|-------|----------|----------|--|-------|----------|-----------|
| Description | For Ø | Part No. | Type | Description | For Ø | Part No. | Type |
| Clevis foot LNG | | | | Clevis foot LSN | | | |
|  | 32 | 33890 | LNG-32 |  | 32 | 5561 | LSN-32 |
| | 40 | 33891 | LNG-40 | | 40 | 5562 | LSN-40 |
| | 50 | 33892 | LNG-50 | | 50 | 5563 | LSN-50 |
| | 63 | 33893 | LNG-63 | | 63 | 5564 | LSN-63 |
| | 80 | 33894 | LNG-80 | | 80 | 5565 | LSN-80 |
| | 100 | 33895 | LNG-100 | | 100 | 5566 | LSN-100 |
| | 125 | 33896 | LNG-125 | | 125 | 6987 | LSN-125 |
| Clevis foot LSNG | | | | Clevis foot LSNSG | | | |
|  | 32 | 31740 | LSNG-32 |  | 32 | 31747 | LSNSG-32 |
| | 40 | 31741 | LSNG-40 | | 40 | 31748 | LSNSG-40 |
| | 50 | 31742 | LSNG-50 | | 50 | 31749 | LSNSG-50 |
| | 63 | 31743 | LSNG-63 | | 63 | 31750 | LSNSG-63 |
| | 80 | 31744 | LSNG-80 | | 80 | 31751 | LSNSG-80 |
| | 100 | 31745 | LSNG-100 | | 100 | 31752 | LSNSG-100 |
| | 125 | 31746 | LSNG-125 | | 125 | 31753 | LSNSG-125 |
| Clevis foot LBG¹⁾ | | | | Right-angle clevis foot LQG¹⁾ | | | |
|  | 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 |
| | 80 | 31765 | LBG-80 | | 80 | 31772 | LQG-80 |
| | 100 | 31766 | LBG-100 | | 100 | 31773 | LQG-100 |
| | 125 | 31767 | LBG-125 | | 125 | 31774 | LQG-125 |






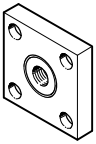
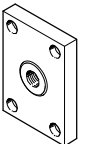
1) Suitable for ATEX

| Ordering data – Mounting components, corrosion-resistant | | | Technical data → Internet: crlng | |
|---|-------|----------|----------------------------------|--|
| Description | For Ø | Part No. | Type | |
| Clevis foot CRLNG | | | | |
|  | 32 | 161840 | CRLNG-32 | |
| | 40 | 161841 | CRLNG-40 | |
| | 50 | 161842 | CRLNG-50 | |
| | 63 | 161843 | CRLNG-63 | |
| | 80 | 161844 | CRLNG-80 | |
| | 100 | 161845 | CRLNG-100 | |
| | 125 | 176951 | CRLNG-125 | |




| Ordering – Mounting attachments, high corrosion protection | | | Technical data → Internet: clevis foot | |
|---|-------|----------|--|--|
| Designation | For Ø | Part No. | Type | |
| Clevis foot LBG-R3 | | | | |
|  | 32 | 2078790 | LBG-32-R3 | |
| | 40 | 2078792 | LBG-40-R3 | |
| | 50 | 2078794 | LBG-50-R3 | |
| | 63 | 2078795 | LBG-63-R3 | |
| | 80 | 2078797 | LBG-80-R3 | |
| | 100 | 2078799 | LBG-100-R3 | |
| | 125 | 2078337 | LBG-125-R3 | |

Standards-based cylinders DSBG, to ISO 15552

Accessories

| Ordering data – Piston rod attachments | | | | Technical data → Internet: piston-rod attachment | | | |
|--|-------|------------|--------------|--|------------|----------|--------------|
| Description | For Ø | Part No. | Type | Description | For Ø | Part No. | Type |
| Rod eye SGS | | | | Rod clevis SGA¹⁾ | | | |
|  | 32 | 9261 | SGS-M10x1,25 |  | 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 | | | | | | |
| | 80 | 9264 | SGS-M20x1,5 | | 80 | 10769 | SGA-M20x1,5 |
| | 100 | 10774 | SGS-M27x2 | | 100 | 10770 | SGA-M27x2 |
| | 125 | | | | | | |
| Rod clevis SG¹⁾ | | | | Self-aligning rod coupler FK¹⁾ | | | |
|  | 32 | 6144 | SG-M10x1,25 |  | 32 | 6140 | FK-M10x1,25 |
| | 40 | 6145 | SG-M12x1,25 | | 40 | 6141 | FK-M12x1,25 |
| | 50 | 6146 | SG-M16x1,5 | | 50 | 6142 | FK-M16x1,5 |
| | 63 | | | | | | |
| 80 | 6147 | SG-M20x1,5 | 80 | 6143 | FK-M20x1,5 | | |
|  | 100 | 14987 | SG-M27x2-B | 100 | 10485 | FK-M27x2 | |
| | 125 | | | | | | |
| Coupling piece KSG¹⁾ | | | | Coupling piece KSZ¹⁾ | | | |
|  | 32 | 32963 | KSG-M10x1,25 |  | 32 | 36125 | KSZ-M10x1,25 |
| | 40 | 32964 | KSG-M12x1,25 | | 40 | 36126 | KSZ-M12x1,25 |
| | 50 | 32965 | KSG-M16x1,5 | | 50 | 36127 | KSZ-M16x1,5 |
| | 63 | | | | | | |
| | 80 | 32966 | KSG-M20x1,5 | | 80 | 36128 | KSZ-M20x1,5 |
| | 100 | 32967 | KSG-M27x2 | | 100 | - | - |
| | 125 | | | | | | |

1) Suitable for ATEX

| Ordering data – Piston rod attachments, corrosion-resistant | | | | Technical data → Internet: piston-rod attachment | | | |
|---|-------|----------|----------------|---|-------|----------|---------------|
| Description | For Ø | Part No. | Type | Description | For Ø | Part No. | Type |
| Rod eye CRSGS | | | | Rod clevis CRSG¹⁾ | | | |
|  | 32 | 195582 | CRSGS-M10x1,25 |  | 32 | 13569 | CRSG-M10x1,25 |
| | 40 | 195583 | CRSGS-M12x1,25 | | 40 | 13570 | CRSG-M12x1,25 |
| | 50 | 195584 | CRSGS-M16x1,5 | | 50 | 13571 | CRSG-M16x1,5 |
| | 63 | | | | | | |
| | 80 | 195585 | CRSGS-M20x1,5 | | 80 | 13572 | CRSG-M20x1,5 |
| | 100 | 195586 | CRSGS-M27x2 | | 100 | 185361 | CRSG-M27x2 |
| | 125 | | | | | | |
| Self-aligning rod coupler CRFK¹⁾ | | | | | | | |
|  | 32 | 2305778 | CRFK-M10x1,25 | | | | |
| | 40 | 2305779 | CRFK-M12x1,25 | | | | |
| | 50 | 2490673 | CRFK-M16x1,5 | | | | |
| | 63 | | | | | | |
| | 80 | 2545677 | CRFK-M20x1,5 | | | | |
| | 100 | | | | | | |

1) Suitable for ATEX

Standards-based cylinders DSBG, to ISO 15552



Accessories

Bellows kit DADB



| General technical data | | | | | | | |
|--|------|--|------------|------------|------------|------------|------------|
| Type DADB-V6- | | 32 | 40 | 50 | 63 | 80 | 100 |
| Max. stroke range of cylinder ¹⁾ | [mm] | 10 ... 500 | 10 ... 500 | 10 ... 500 | 10 ... 500 | 10 ... 500 | 10 ... 500 |
| Type of mounting | | Via threaded pin | | | | | |
| Mounting position | | Any | | | | | |
| Resistance to media | | Dust, chippings, oil, grease, fuel (→ Internet: Resistance to media) | | | | | |
| Ambient temperature ²⁾ | [°C] | -10 ... +80 | | | | | |
| Degree of protection | | IP54 | | | | | |
| Corrosion resistance class CRC ³⁾ | | 3 | | | | | |

1) In combination with bellows kit DADB

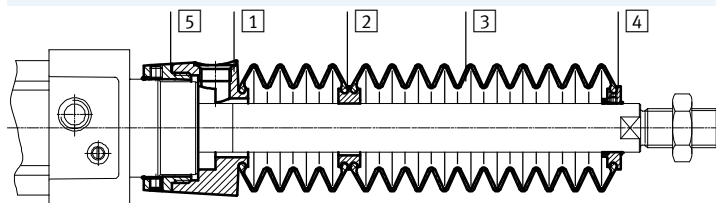
2) Note operating range of proximity sensors and cylinder

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

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

Materials

Sectional view



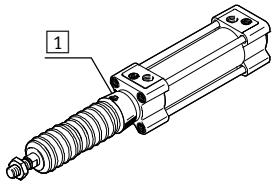
| Bellows | | |
|-------------------|------------|-------------------------|
| 1 | Connection | Polyamide |
| 2 | Adapter | Polyamide |
| 3 | Bellows | NBR |
| 4 | End piece | Polyamide |
| 5 | Connector | Polyamide |
| - | O-ring | NBR |
| Note on materials | | Free of copper and PTFE |
| | | RoHS compliant |

| Weight [g] | | | | | | | |
|---------------|--|-----|-----|-----|-----|-----|-----|
| Type DADB-V6- | | 32 | 40 | 50 | 63 | 80 | 100 |
| Stroke [mm] | | | | | | | |
| 10 ... 50 | | 29 | 42 | 71 | 69 | 99 | 124 |
| 51 ... 125 | | 41 | 56 | 91 | 89 | 127 | 152 |
| 126 ... 175 | | 52 | 68 | 105 | 103 | 140 | 165 |
| 176 ... 250 | | 66 | 85 | 129 | 127 | 193 | 218 |
| 251 ... 300 | | 79 | 100 | 147 | 145 | 231 | 255 |
| 301 ... 350 | | 92 | 115 | 166 | 164 | 268 | 293 |
| 351 ... 375 | | 92 | 115 | 167 | 165 | 259 | 284 |
| 376 ... 425 | | 104 | 129 | 185 | 183 | 296 | 321 |
| 426 ... 475 | | 117 | 144 | 204 | 202 | 334 | 359 |
| 476 ... 500 | | 117 | 144 | 205 | 203 | 324 | 349 |

Standards-based cylinders DSBG, to ISO 15552

Accessories

Travel speed v as a function of tubing length l



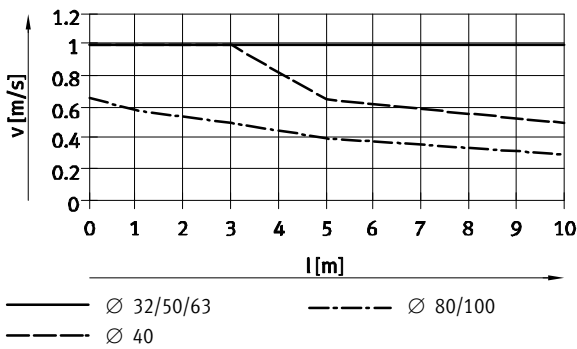
The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a pressure compensation hole in the

connection part **1**.

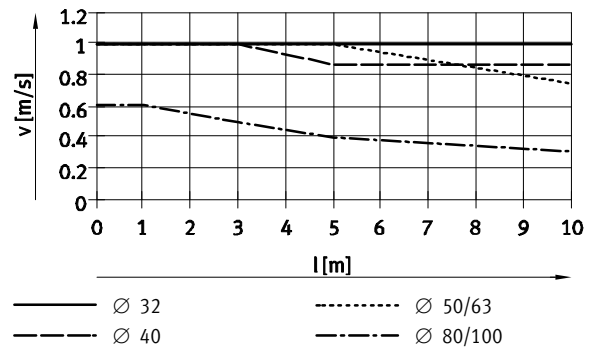
The pressure generated in the bellows kit by the positioning motion is primarily defined by the travel speed

and tubing length. The recommended tubing length based on the travel speed of the drive can be read from the graph.

Advancing



Retracting

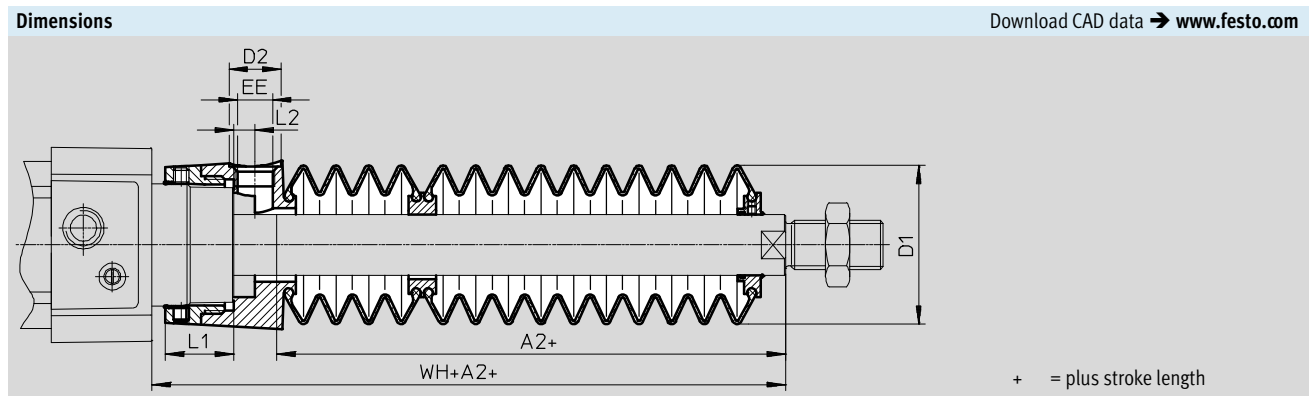


Note
The push-in fittings in the adjacent table must be used for the pressure compensation hole. Silencers can be used as an alternative. This reduces the travel speed slightly.

| Tubing size and push-in fitting for pressure compensation hole | | | |
|--|------------------|-----------------|--------------------|
| Ø [mm] | Tubing O.D. [mm] | Push-in fitting | |
| | | Part No. | Type |
| 32, 40 | 8 | 186109 | QS-G1/8-8-I |
| | | 578376 | NPQH-DK-G18-Q8-P10 |
| | | 578362 | NPQH-D-G18-S8-P10 |
| 50, 63, 80, 100 | 12 | 186350 | QS-G1/4-12 |
| | | 578344 | NPQH-D-G14-Q12-P10 |
| | | 578366 | NPQH-D-G14-S12-P10 |

Standards-based cylinders DSBG, to ISO 15552

Accessories



| Ø Stroke [mm] | 32 | | | | | | | 40 | | | | | | |
|---------------------|------------------|------------|----|------|------|-----|-------|------------------|------------|----|------|------|-----|-------|
| | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 50 | 29 | 38 | 14 | G1/8 | 12.9 | 5.4 | 55 | 28 | 46 | 14 | G1/8 | 16.3 | 5.4 | 56.7 |
| 51 ... 125 | 47 | | | | | | 73 | 43 | | | | | | 71.7 |
| 126 ... 175 | 61 | | | | | | 87 | 56 | | | | | | 84.7 |
| 176 ... 250 | 80 | | | | | | 106 | 72 | | | | | | 100.7 |
| 251 ... 300 | 96 | | | | | | 122 | 86 | | | | | | 114.7 |
| 301 ... 350 | 112 | | | | | | 138 | 100 | | | | | | 128.7 |
| 351 ... 375 | 114 | | | | | | 140 | 101 | | | | | | 129.7 |
| 376 ... 425 | 130 | | | | | | 156 | 115 | | | | | | 143.7 |
| 426 ... 475 | 145 | | | | | | 171 | 130 | | | | | | 158.7 |
| 476 ... 500 | 147 | | | | | | 173 | 131 | | | | | | 159.7 |

| Ø Stroke [mm] | 50 | | | | | | | 63 | | | | | | |
|---------------------|------------------|------------|----|------|-------|----|-------|------------------|------------|----|------|------|----|-------|
| | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 50 | 28 | 57 | 17 | G1/4 | 22.35 | 7 | 63.6 | 28 | 57 | 17 | G1/4 | 22.4 | 7 | 63.9 |
| 51 ... 125 | 46 | | | | | | 81.6 | 46 | | | | | | 81.9 |
| 126 ... 175 | 56 | | | | | | 91.6 | 56 | | | | | | 91.9 |
| 176 ... 250 | 73 | | | | | | 108.6 | 73 | | | | | | 108.9 |
| 251 ... 300 | 86 | | | | | | 121.6 | 86 | | | | | | 121.9 |
| 301 ... 350 | 97 | | | | | | 132.6 | 97 | | | | | | 132.9 |
| 351 ... 375 | 105 | | | | | | 140.6 | 105 | | | | | | 140.9 |
| 376 ... 425 | 116 | | | | | | 151.6 | 116 | | | | | | 151.9 |
| 426 ... 475 | 126 | | | | | | 161.6 | 126 | | | | | | 161.9 |
| 476 ... 500 | 134 | | | | | | 169.6 | 134 | | | | | | 169.9 |

| Ø Stroke [mm] | 80 | | | | | | | 100 | | | | | | |
|---------------------|------------------|------------|----|------|----|----|-------|------------------|------------|----|------|----|----|-------|
| | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 | A2 ¹⁾ | D1 Max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 50 | 25 | 93 | 17 | G1/4 | 28 | 4 | 70.4 | 25 | 93 | 17 | G1/4 | 28 | 4 | 74.3 |
| 51 ... 125 | 37 | | | | | | 82.4 | 37 | | | | | | 86.3 |
| 126 ... 175 | 49 | | | | | | 94.4 | 49 | | | | | | 98.3 |
| 176 ... 250 | 62 | | | | | | 107.4 | 62 | | | | | | 111.3 |
| 251 ... 300 | 74 | | | | | | 119.4 | 74 | | | | | | 123.3 |
| 301 ... 350 | 86 | | | | | | 131.4 | 86 | | | | | | 135.3 |
| 351 ... 375 | 87 | | | | | | 132.4 | 87 | | | | | | 136.3 |
| 376 ... 425 | 98 | | | | | | 143.4 | 98 | | | | | | 147.3 |
| 426 ... 475 | 110 | | | | | | 155.4 | 110 | | | | | | 159.3 |
| 476 ... 500 | 111 | | | | | | 156.4 | 111 | | | | | | 160.3 |

1) The dimension corresponds to the E value (piston rod extension) of the drive

Standards-based cylinders DSBG, to ISO 15552

Accessories

Ordering data – Bellows kit

An extended piston rod (order code E) is absolutely required when using a bellows kit → Ordering data – Modular products.

The necessary dimension for order code E 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 standards-based cylinder:

DSBG-32-320-PPV-A-...

The dimension for the corresponding E value (see table):
112 mm

Complete type code for standards-based cylinder:

DSBG-32-320-PPV-A-...-112E

The corresponding bellows kit:

DADB-V6-32-S301-350

| Cylinder data | | | Bellows kit | | Cylinder data | | | Bellows kit | |
|---------------|-------------|----------------------|-------------|---------------------|---------------|-------------|----------------------|-------------|----------------------|
| ∅ | Stroke | Dimen- sion for E | Part No. | Type | ∅ | Stroke | Dimen- sion for E | Part No. | Type |
| [mm] | [mm] | [mm] | | | [mm] | [mm] | [mm] | | |
| 32 | 10 ... 50 | 29 | 553271 | DADB-V6-32-S10-50 | 40 | 10 ... 50 | 28 | 553291 | DADB-V6-40-S10-50 |
| | 51 ... 125 | 47 | 553273 | DADB-V6-32-S51-125 | | 51 ... 125 | 43 | 553293 | DADB-V6-40-S51-125 |
| | 126 ... 175 | 61 | 553275 | DADB-V6-32-S126-175 | | 126 ... 175 | 56 | 553295 | DADB-V6-40-S126-175 |
| | 176 ... 250 | 80 | 553277 | DADB-V6-32-S176-250 | | 176 ... 250 | 72 | 553297 | DADB-V6-40-S176-250 |
| | 251 ... 300 | 96 | 553279 | DADB-V6-32-S251-300 | | 251 ... 300 | 86 | 553399 | DADB-V6-40-S251-300 |
| | 301 ... 350 | 112 | 553281 | DADB-V6-32-S301-350 | | 301 ... 350 | 100 | 553301 | DADB-V6-40-S301-350 |
| | 351 ... 375 | 114 | 553283 | DADB-V6-32-S351-375 | | 351 ... 375 | 101 | 553303 | DADB-V6-40-S351-375 |
| | 376 ... 425 | 130 | 553285 | DADB-V6-32-S376-425 | | 376 ... 425 | 115 | 553305 | DADB-V6-40-S376-425 |
| | 426 ... 475 | 145 | 553287 | DADB-V6-32-S426-475 | | 426 ... 475 | 130 | 553307 | DADB-V6-40-S426-475 |
| | 476 ... 500 | 147 | 553289 | DADB-V6-32-S476-500 | | 476 ... 500 | 131 | 553309 | DADB-V6-40-S476-500 |
| 50 | 10 ... 50 | 28 | 553311 | DADB-V6-50-S10-50 | 63 | 10 ... 50 | 28 | 553331 | DADB-V6-63-S10-50 |
| | 51 ... 125 | 46 | 553313 | DADB-V6-50-S51-125 | | 51 ... 125 | 46 | 553333 | DADB-V6-63-S51-125 |
| | 126 ... 175 | 56 | 553315 | DADB-V6-50-S126-175 | | 126 ... 175 | 56 | 553335 | DADB-V6-63-S126-175 |
| | 176 ... 250 | 73 | 553317 | DADB-V6-50-S176-250 | | 176 ... 250 | 73 | 553337 | DADB-V6-63-S176-250 |
| | 251 ... 300 | 86 | 553319 | DADB-V6-50-S251-300 | | 251 ... 300 | 86 | 553339 | DADB-V6-63-S251-300 |
| | 301 ... 350 | 97 | 553321 | DADB-V6-50-S301-350 | | 301 ... 350 | 97 | 553341 | DADB-V6-63-S301-350 |
| | 351 ... 375 | 105 | 553323 | DADB-V6-50-S351-375 | | 351 ... 375 | 105 | 553343 | DADB-V6-63-S351-375 |
| | 376 ... 425 | 116 | 553325 | DADB-V6-50-S376-425 | | 376 ... 425 | 116 | 553345 | DADB-V6-63-S376-425 |
| | 426 ... 475 | 126 | 553327 | DADB-V6-50-S426-475 | | 426 ... 475 | 126 | 553347 | DADB-V6-63-S426-475 |
| | 476 ... 500 | 134 | 553329 | DADB-V6-50-S476-500 | | 476 ... 500 | 134 | 553349 | DADB-V6-63-S476-500 |
| 80 | 10 ... 50 | 25 | 553351 | DADB-V6-80-S10-50 | 100 | 10 ... 50 | 25 | 553371 | DADB-V6-100-S10-50 |
| | 51 ... 125 | 37 | 553353 | DADB-V6-80-S51-125 | | 51 ... 125 | 37 | 553373 | DADB-V6-100-S51-125 |
| | 126 ... 175 | 49 | 553355 | DADB-V6-80-S126-175 | | 126 ... 175 | 49 | 553375 | DADB-V6-100-S126-175 |
| | 176 ... 250 | 62 | 553357 | DADB-V6-80-S176-250 | | 176 ... 250 | 62 | 553377 | DADB-V6-100-S176-250 |
| | 251 ... 300 | 74 | 553359 | DADB-V6-80-S251-300 | | 251 ... 300 | 74 | 553379 | DADB-V6-100-S251-300 |
| | 301 ... 350 | 86 | 553361 | DADB-V6-80-S301-350 | | 301 ... 350 | 86 | 553381 | DADB-V6-100-S301-350 |
| | 351 ... 375 | 87 | 553363 | DADB-V6-80-S351-375 | | 351 ... 375 | 87 | 553383 | DADB-V6-100-S351-375 |
| | 376 ... 425 | 98 | 553365 | DADB-V6-80-S376-425 | | 376 ... 425 | 98 | 553385 | DADB-V6-100-S376-425 |
| | 426 ... 475 | 110 | 553367 | DADB-V6-80-S426-475 | | 426 ... 475 | 110 | 553387 | DADB-V6-100-S426-475 |
| | 476 ... 500 | 111 | 553369 | DADB-V6-80-S476-500 | | 476 ... 500 | 111 | 553389 | DADB-V6-100-S476-500 |

Standards-based cylinders DSBG, to ISO 15552

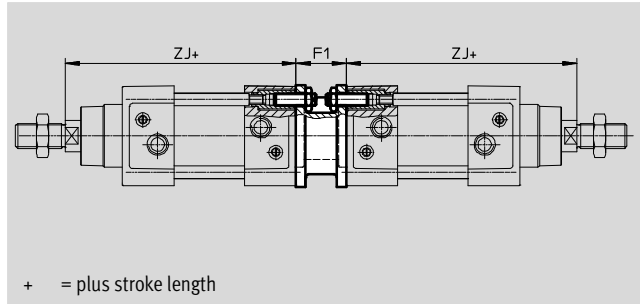
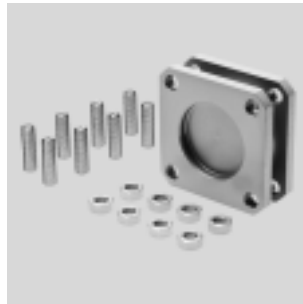
Accessories



Multi-position kit DPNC

Materials:

Flange: Wrought aluminium alloy
Threaded pins, hex nuts: Galvanised steel



| Dimensions and ordering data | | | | | | |
|------------------------------|----|-------|----------------------|--------|---------------|--------------------|
| For Ø | F1 | ZJ | Max. complete stroke | Weight | Part No. | Type ¹⁾ |
| [mm] | | +1.8 | [mm] | [g] | | |
| 32 | 27 | 119.1 | 500 | 292 | 174418 | DPNC-32 |
| 40 | 27 | 133.9 | 800 | 410 | 174419 | DPNC-40 |
| 50 | 32 | 141.8 | 800 | 335 | 174420 | DPNC-50 |
| 63 | 28 | 157.1 | 700 | 390 | 174421 | DPNC-63 |
| 80 | 38 | 173.6 | 1000 | 847 | 174422 | DPNC-80 |
| 100 | 38 | 187.5 | 900 | 1200 | 174423 | DPNC-100 |
| 125 | 48 | 225 | 1000 | 2102 | 174424 | DPNC-125 |

1) Suitable for ATEX

Note
The maximum overall stroke length must not be exceeded when combining cylinders and multi-position kits.

Connecting two cylinders with identical piston Ø as a 3 or 4-position cylinder

A 3 or 4-position cylinder consists of two separate cylinders whose piston rods advance in opposing directions.

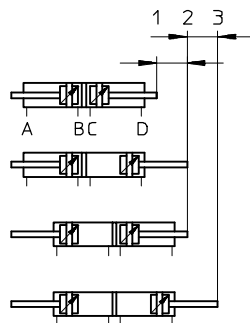
This means that depending on actuation and stroke division, this type of cylinder can assume up to four

positions. In each case the cylinder is driven precisely against a stop. Note that when one end of the piston rod is

fixed, the cylinder barrel executes the movement. The line connections to the cylinder must be flexible.

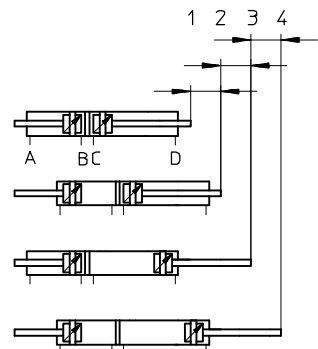
To achieve 3 positions

Two cylinders with identical stroke length must be connected together.



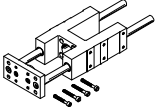
To achieve 4 positions

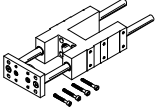
Two cylinders with different stroke lengths must be connected together.



Standards-based cylinders DSBG, to ISO 15552

Accessories

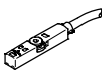
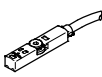
| Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only) | | | | Technical data → Internet: festo | | |
|---|-------------|----------|--------------------|----------------------------------|-------------|--------------------|
|  | Stroke [mm] | Part No. | Type ¹⁾ | Stroke [mm] | Part No. | Type ¹⁾ |
| | For Ø 32 mm | | | | For Ø 40 mm | |
| | 10 ... 50 | 34493 | FENG-32-50-KF | 10 ... 50 | 34499 | FENG-40-50-KF |
| | 10 ... 100 | 34494 | FENG-32-100-KF | 10 ... 100 | 34500 | FENG-40-100-KF |
| | 10 ... 160 | 34495 | FENG-32-160-KF | 10 ... 160 | 34501 | FENG-40-160-KF |
| | 10 ... 200 | 34496 | FENG-32-200-KF | 10 ... 200 | 34502 | FENG-40-200-KF |
| | 10 ... 250 | 150289 | FENG-32-250-KF | 10 ... 250 | 34503 | FENG-40-250-KF |
| | 10 ... 320 | 34497 | FENG-32-320-KF | 10 ... 320 | 34504 | FENG-40-320-KF |
| | 10 ... 400 | 150290 | FENG-32-400-KF | 10 ... 400 | 150291 | FENG-40-400-KF |
| | 10 ... 500 | 34498 | FENG-32-500-KF | 10 ... 500 | 34505 | FENG-40-500-KF |
| For Ø 50 mm | | | | For Ø 63 mm | | |
| | 10 ... 50 | 34506 | FENG-50-50-KF | 10 ... 50 | 34513 | FENG-63-50-KF |
| | 10 ... 100 | 34507 | FENG-50-100-KF | 10 ... 100 | 34514 | FENG-63-100-KF |
| | 10 ... 160 | 34508 | FENG-50-160-KF | 10 ... 160 | 34515 | FENG-63-160-KF |
| | 10 ... 200 | 34509 | FENG-50-200-KF | 10 ... 200 | 34516 | FENG-63-200-KF |
| | 10 ... 250 | 34510 | FENG-50-250-KF | 10 ... 250 | 34517 | FENG-63-250-KF |
| | 10 ... 320 | 34511 | FENG-50-320-KF | 10 ... 320 | 34518 | FENG-63-320-KF |
| | 10 ... 400 | 150292 | FENG-50-400-KF | 10 ... 400 | 34519 | FENG-63-400-KF |
| | 10 ... 500 | 34512 | FENG-50-500-KF | 10 ... 500 | 34520 | FENG-63-500-KF |
| For Ø 80 mm | | | | For Ø 100 mm | | |
| | 10 ... 50 | 34521 | FENG-80-50-KF | 10 ... 50 | 34529 | FENG-100-50-KF |
| | 10 ... 100 | 34522 | FENG-80-100-KF | 10 ... 100 | 34530 | FENG-100-100-KF |
| | 10 ... 160 | 34523 | FENG-80-160-KF | 10 ... 160 | 34531 | FENG-100-160-KF |
| | 10 ... 200 | 34524 | FENG-80-200-KF | 10 ... 200 | 34532 | FENG-100-200-KF |
| | 10 ... 250 | 34525 | FENG-80-250-KF | 10 ... 250 | 34533 | FENG-100-250-KF |
| | 10 ... 320 | 34526 | FENG-80-320-KF | 10 ... 320 | 34534 | FENG-100-320-KF |
| | 10 ... 400 | 34527 | FENG-80-400-KF | 10 ... 400 | 34535 | FENG-100-400-KF |
| | 10 ... 500 | 34528 | FENG-80-500-KF | 10 ... 500 | 34536 | FENG-100-500-KF |

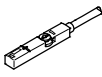
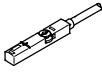
| Ordering data – Guide units for variable strokes | | | | Technical data → Internet: festo | |
|---|------------|-------------|--|---|----------------------|
|  | For Ø [mm] | Stroke [mm] | With recirculating ball bearing guide Part No. Type ¹⁾ | With plain-bearing guide Part No. Type ¹⁾ | |
| | | 32 | 10 ... 500 | 34487 FENG-32-...-KF | 34481 FENG-32-...-GF |
| | 40 | 10 ... 500 | 34488 FENG-40-...-KF | 34482 FENG-40-...-GF | |
| | 50 | 10 ... 500 | 34489 FENG-50-...-KF | 34483 FENG-50-...-GF | |
| | 63 | 10 ... 500 | 34490 FENG-63-...-KF | 34484 FENG-63-...-GF | |
| | 80 | 10 ... 500 | 34491 FENG-80-...-KF | 34485 FENG-80-...-GF | |
| | 100 | 10 ... 500 | 34492 FENG-100-...-KF | 34486 FENG-100-...-GF | |

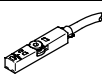
1) Suitable for ATEX


Standards-based cylinders DSBG, to ISO 15552



Accessories

| Ordering data – Proximity sensor for T-slot, magneto-resistive | | | | | | Technical data → Internet: smt | |
|---|--|------------------|-----------------------------|------------------|----------|--------------------------------|--|
| | Type of mounting | Switching output | Electrical connection | Cable length [m] | Part No. | Type | |
| N/O contact | | | | | | | |
|  | 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 connector M8x1, 3-pin | 0.3 | 574334 | SMT-8M-A-PS-24V-E-0,3-M8D | |
| | | | Plug connector M12x1, 3-pin | 0.3 | 574337 | SMT-8M-A-PS-24V-E-0,3-M12 | |
| | | NPN | Cable, 3-wire | 2.5 | 574338 | SMT-8M-A-NS-24V-E-2,5-OE | |
| | | | Plug connector M8x1, 3-pin | 0.3 | 574339 | SMT-8M-A-NS-24V-E-0,3-M8D | |
| N/C contact | | | | | | | |
|  | 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 sensors for T-slot, magnetic reed | | | | | | Technical data → Internet: sme | |
|---|--|------------------|-----------------------|----------------------------|----------|--------------------------------|-------------------------|
| | Type of mounting | Switching output | Electrical connection | Cable length [m] | Part No. | Type | |
| N/O contact | | | | | | | |
|  | 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 connector M8x1, 3-pin | 0.3 | 543861 | SME-8M-DS-24V-K-0,3-M8D |
| N/C contact | | | | | | | |
|  | Insertable in the slot from above, flush with the cylinder profile | Contacting | Cable, 3-wire | 7.5 | 546799 | SME-8M-DO-24V-K-7,5-OE | |



| Ordering data – Proximity sensor for T-slot, magneto-resistive, for ATEX zone | | | | | | | Technical data → Internet: smt | |
|---|--|---------------|-------|------------------|-----------------------------|------------------|--------------------------------|-------------------------------|
| | Type of mounting | ATEX category | | Switching output | Electrical connection | Cable length [m] | Part No. | Type |
| | | Gas | Dust | | | | | |
| N/O contact | | | | | | | | |
|  | Insertable in the slot from above, flush with the cylinder profile, short design | II 3G | II 3D | PNP | Plug connector M8x1, 3-wire | 0.3 | 574342 | SMT-8M-A-PS-24V-E-0,3-M8D-EX2 |


| Ordering data – Safety clip for ATEX zone | | | |
|---|--|---------------------|-------------------|
| | Description | For size | Part No. Type |
|  | <ul style="list-style-type: none"> Protects "equipment that is not intrinsically safe" against simple disconnection, here the plug connector of the proximity sensor SMT and connecting cable NEBU ATEX category: gas: II 3G / dust: II 3D | Plug connector M8x1 | 548067 NEAU-M8-GD |

| Ordering data – Connecting cables | | | | | Technical data → 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 | |

Standards-based cylinders DSBG, to ISO 15552

Accessories

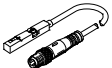

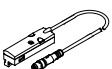
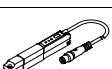
| Ordering data – Mounting kits for proximity sensor SME/SMT-8 | | | | | | | |
|---|------------|---|--|--|----------|---------------|--|
| | For Ø | Materials | | | Part No. | Type | |
|  | 32 ... 100 | Rail: Anodised wrought aluminium alloy Screws: High-alloy stainless steel Free of copper and PTFE | | | 537806 | SMBZ-8-32/100 | |
|  | 125 | | | | 1451483 | DASP-M4-125-A | |

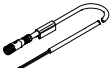

| Ordering data – Mounting kit for proximity sensor SME/SMT-8 | | | | | Technical data → Internet: smbr | | |
|---|------------|---|-------------------|----------|---------------------------------|--|--|
| | For Ø | Mounting | CRC ¹⁾ | Part No. | Type | | |
|  | 32 ... 100 | On the cylinder barrel via clamping strap | 4 | 538937 | SMBR-8-8/100-S6 | | |

1) 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, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

Position sensor


The position sensor continuously senses the position of the piston. It has an analogue output with an output signal in proportion to the piston position.

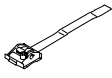
| Ordering data – Position sensor for T-slot | | | | | | | | Technical data → Internet: position sensor | |
|---|------------|--------------------------|-----------------|----------|-----------------------------------|-------------------------------------|------------------|--|------------------------------|
| | For Ø | Position measuring range | Analogue output | | Type of mounting | Electrical connection | Cable length [m] | Part No. | Type |
| | | | [V] | [mA] | | | | | |
|  | 32 ... 125 | 0 ... 40 | 0 ... 10 | – | Inserted in the slot from above | Plug connector M8x1, 4-pin, in-line | 0.3 | 553744 | SMAT-8M-U-E-0.3-M8D |
|  | 125 | 0 ... 50 | 0 ... 10 | 4 ... 20 | Inserted into the slot lengthwise | Plug M8x1, 4-pin, right angle | – | 540191 | SMAT-8E-S50-IU-M8 |
|  | | | | | | Plug connector M8x1, 4-pin, in-line | 0.3 | 570134 | SMAT-8E-S50-IU-E-0.3-M8D |
|  | 32 ... 125 | 0 ... 50 | – | 4 ... 20 | Inserted in the slot from above | Plug connector M8x1, 4-pin, in-line | 0.3 | 1531265 | SDAT-MHS-M50-1L-SA-E-0.3-M8 |
| | | 0 ... 80 | | | | | | 1531266 | SDAT-MHS-M80-1L-SA-E-0.3-M8 |
| | | 0 ... 100 | | | | | | 1531267 | SDAT-MHS-M100-1L-SA-E-0.3-M8 |
| | | 0 ... 125 | | | | | | 1531268 | SDAT-MHS-M125-1L-SA-E-0.3-M8 |
| | | 0 ... 160 | | | | | | 1531269 | SDAT-MHS-M160-1L-SA-E-0.3-M8 |


| Ordering data – Connecting cables | | | | | Technical data → Internet: nebu | |
|---|------------------------------|------------------------------|------------------|----------|---------------------------------|--|
| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part No. | Type | |
|  | Straight socket, M8x1, 4-pin | Cable, open end, 4-wire | 2.5 | 541342 | NEBU-M8G4-K-2.5-LE4 | |
| | | | 5 | 541343 | NEBU-M8G4-K-5-LE4 | |
|  | Angled socket, M8x1, 4-pin | Cable, open end, 4-wire | 2.5 | 541344 | NEBU-M8W4-K-2.5-LE4 | |
| | | | 5 | 541345 | NEBU-M8W4-K-5-LE4 | |

Standards-based cylinders DSBG, to ISO 15552

Accessories

| Ordering data – Rectangular proximity sensors, pneumatic | | | Technical data → Internet: smpo | |
|---|-----------------|---------------------------------------|---------------------------------|-------------------|
| | Mounting | Pneumatic port | Part No. | Type |
| 3/2-way valve, normally closed | | | | |
|  | Via accessories | Barbed connector for tubing I.D. 3 mm | 31008 | SMPO-1-H-B |

| Ordering data – Mounting kit for proximity sensor SMPO-1 | | | Technical data → Internet: smbs | |
|---|---------------|---|---------------------------------|---------------|
| | For Ø | Mounting | Part No. | Type |
|  | 32 ... 100 mm | On the cylinder barrel via clamping strap | 151226 | SMBS-2 |

| Ordering data – One-way flow control valves | | | | Technical data → Internet: grl | |
|---|--------|-----------------|--------------|--------------------------------|-------------------------|
| | Port | | Material | Part No. | Type |
| | Thread | For tubing O.D. | | | |
| For exhaust air | | | | | |
|  | G1/8 | 4 | Metal design | 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 |
| | G1/2 | 12 | | 193152 | GRLA-1/2-QS-12-D |