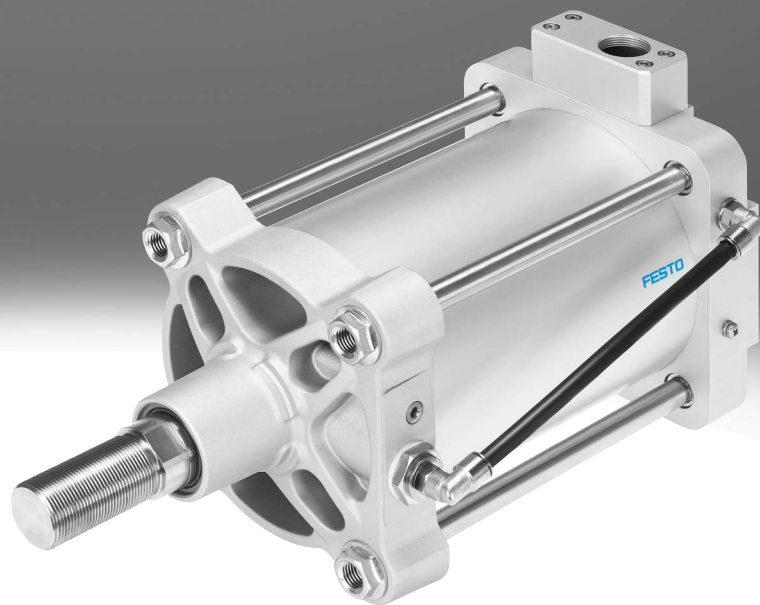


Linear actuators DFPI

FESTO



Key features

Function

DFPIs are adjustable linear actuators. Product versions with an integrated displacement encoder DFPI-...-E-... are available.

The displacement encoder integrated in the DFPI-...-E-... version returns an analogue voltage or current signal proportional to the position of the piston. This can be used for operation with an external positioner. The positions are specified via an analogue setpoint signal 4 ... 20 mA. The position feedback uses an analogue feedback signal of 4 ... 20 mA. The feedback signal guarantees high reliability and simple diagnostics for the operator. The travel speed can be influenced using the integrated flow control screws. Variants with a mounting interface to ISO 15552

are available. The sturdy corrosion-resistant design of the DFPI is ideal for use under harsh ambient conditions.

Innovative

- Ready-to-install, compact unit for easy installation
- Sturdy and corrosion-resistant, ideal for use under harsh ambient conditions
- Suitable for directly attaching a positioner in accordance with VDE/VDI 3847-2 and valve terminal VTOP for additional pneumatic functions. The integrated air supply avoids leakage caused as there are fewer connecting points between the individual components, thus preventing errors

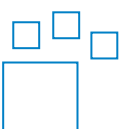
Versatile

- Wide range of accessories for virtually any installation situation
- Suitable for use in potentially explosive locations
- Additional contactless binary end-position sensing possible with proximity switches
- Suitable for applications with closed-loop controlled linear and swivel motions

Design

- Double-acting
- Optionally with integrated displacement encoder or fully integrated positioner
- Sizes \varnothing 100, \varnothing 125, \varnothing 160, \varnothing 200, \varnothing 250 and \varnothing 320
- Stroke lengths 40 to 990 mm
- Mounting interfaces to ISO 15552
- IP65, IP67, IP69K, NEMA4
- ATEX certification

Ordering data – Product options



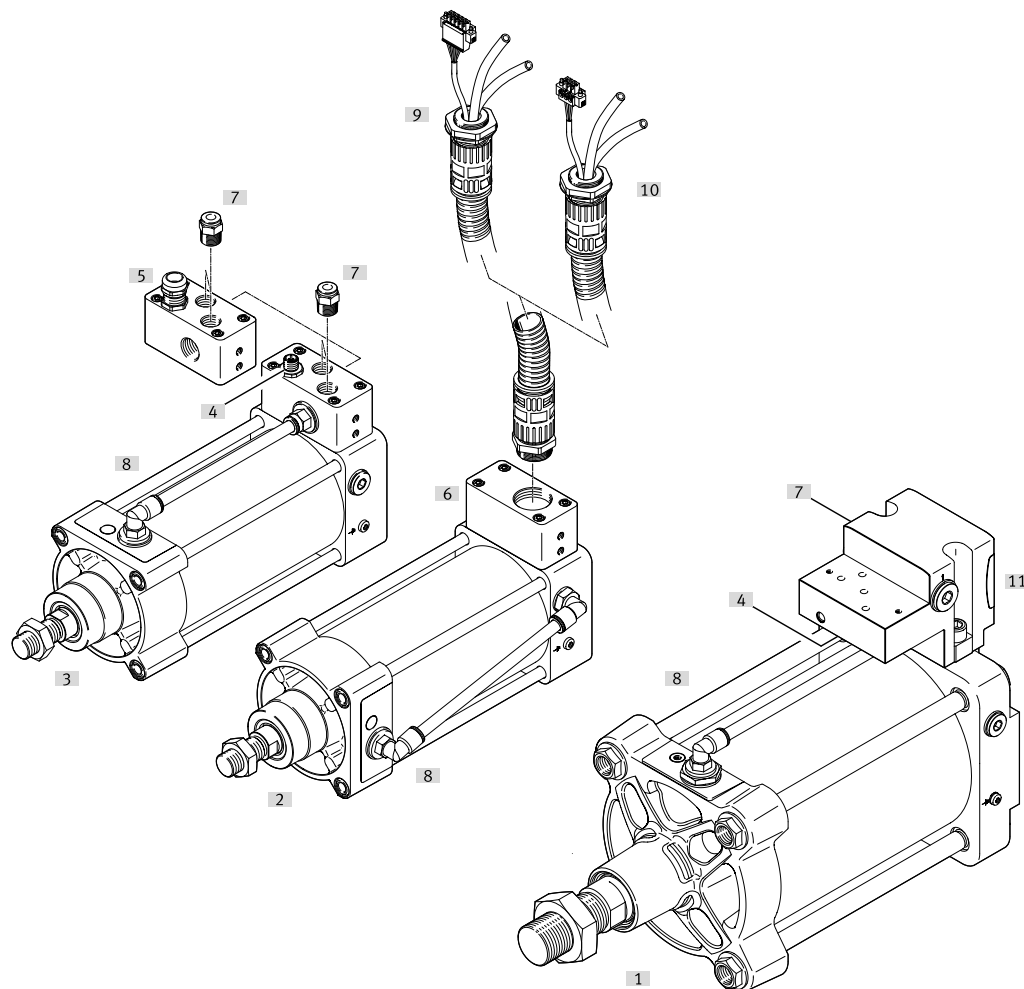
Configurable product
This product and all its product options can be ordered using the configurator.

The configurator can be found under
Products on the DVD or at
→ www.festo.com/catalogue/...

| Part no. | Type |
|----------------|-----------------|
| 5078949 | DFPI-100 |
| 5087658 | DFPI-125 |
| 5091793 | DFPI-160 |
| 5092508 | DFPI-200 |
| 5099770 | DFPI-250 |
| 5106115 | DFPI-320 |

Key features

Product options for DFPI-...-NB3P... based on ISO 15552

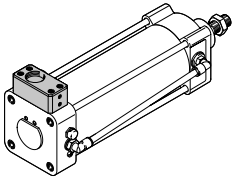
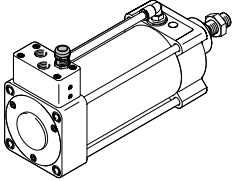
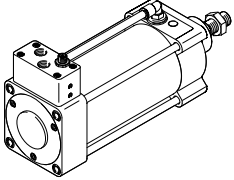
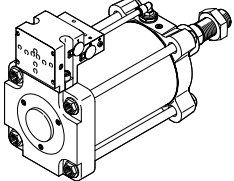


- [1] DFPI-...-ND2P-E-NB3VM12 with piston diameter 160 ... 320
- [2] DFPI-...-C1V-NB3
- [3] DFPI-...-E-NB3...
- [4] M12x1 plug, 5-pin, A-coded
- [5] Cable fitting M16x1.5
- [6] Metal flange socket
- [7] Push-in fitting QS¹⁾
- [8] Air supply on the actuator, stainless steel pipe or plastic tubing
- [9] Connecting cable NHSB¹⁾, 5-core, for DFPI-...-C1V-P-A
- [10] Connecting line NHSB¹⁾ 3-core, for DFPI-...-E-P
- [11] Manifold block for direct attachment of a positioner in accordance with VDE/VDI 3847-2 and valve terminal VTOP for additional pneumatic functions

Product range overview

DFPI-...-E-NB3...

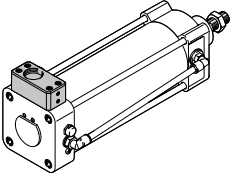
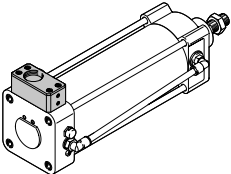
- For operation with an external positioner with analogue voltage input or 4 ... 20 mA current input
- Potentiometric displacement encoder integrated into the actuator DFPI, optionally with integrated 4...20 mA transmitter for analogue current output signal for displacement (DFPI-...ENB3P-...-I-...)
- Sturdy tie rod design
- Double-acting
- Mounting interfaces to ISO 15552 on bearing and end caps

| Version | Characteristics | | → page |
|-------------------|-------------------------|---|--------|
| DFPI-...-E-NB3... | DFPI-...-E-NB3P-... |  <ul style="list-style-type: none"> • Electrical, pneumatic connection using metal flange socket, pre-assembled connecting cable NHSB, see chapter on Accessories • Air supply on the outside of the actuator via plastic tubing | 9 |
| | DFPI-...-E-NB3P9B2-... |  <ul style="list-style-type: none"> • Electrical connection using cable connector M16x1.5, screw terminal • Pneumatic connection G3/8 • Air supply on the outside of the actuator, either using a stainless steel pipe for variant DFPI-...-E-NB3P9B2-M or plastic tubing for variant DFPI-...-E-NB3P9B2 | 9 |
| | DFPI-...-E-NB3M12B2-... |  <ul style="list-style-type: none"> • Electrical connection via M12x1 plug, 5-pin • Pneumatic connection G3/8 • Air supply on the outside of the actuator, either using a stainless steel pipe for variant DFPI-...-E-NB3M12B2-M or plastic tubing for variant DFPI-...-E-NB3M12B2 | 9 |
| | DFPI-...-ND2P-E-NB3VM12 |  <ul style="list-style-type: none"> • Piston \varnothing 160 ... 320 • Direct attachment of a positioner in accordance with VDE/VDI 3847-2 and valve terminal VTOP for additional pneumatic functions • Electrical connection via M12x1 plug, 5-pin • Pneumatic connection G1/2 • Air supply on the outside of the actuator, either using a stainless steel pipe for variant DFPI-...-E-NB3VM12B2-M or plastic tubing for variant DFPI-...-E-NB3VM12B2 | 9 |

Product range overview

DFPI...-C1V-NB3...

- Digital electropneumatic positioner integrated within the actuator housing
- Setpoint input 4 ... 20 mA
- Position feedback 4 ... 20 mA
- Safety position with either retracting or advancing piston rod depending on the product version
- Sturdy tie rod design
- Double-acting
- Mounting interfaces to ISO 15552 on bearing and end caps

| Version | Characteristics | | → page |
|-----------------|--|---|--------|
| DFPI...-C1V-NB3 | DFPI...-C1V-NB3P-A  | <ul style="list-style-type: none"> • Electrical, pneumatic connection using metal flange socket, pre-assembled connecting cable NHSB, see chapter on Accessories • Air supply on the outside of the actuator via plastic tubing • Safety position if the operating voltage or setpoint signal fails: advancing piston rod | 16 |
| | DFPI...-C1V-NB3P-R-A  | <ul style="list-style-type: none"> • Electrical, pneumatic connection using metal flange socket, pre-assembled connecting cable NHSB, see chapter on Accessories • Air supply on the outside of the actuator via plastic tubing • Safety position if the operating voltage or setpoint signal fails: retracting piston rod | 16 |

Type codes

| | |
|------|--|
| 001 | Series |
| DFPI | Linear actuator, closed-loop controlled for process automation |

| | |
|-----|----------------------|
| 002 | Piston diameter [mm] |
| 100 | 100 |
| 125 | 125 |
| 160 | 160 |
| 200 | 200 |
| 250 | 250 |
| 320 | 320 |

| | |
|-----|-------------------|
| 003 | Stroke range [mm] |
| ... | 40 ... 990 |

| | |
|-----|---------------|
| 004 | Cushioning |
| N | No cushioning |

| | |
|-----|----------------------|
| 005 | Displacement encoder |
| D2 | Analogue |

| | |
|-----|-----------------------|
| 006 | Method of measurement |
| P | Potentiometer |

| | |
|-----|--------------|
| 007 | Control unit |
| | None |
| C1 | Controller 1 |

| | |
|-----|-------------------------------|
| 008 | Regulator attachment position |
| | Integrated |
| E | External |

| | |
|-----|---------------------------|
| 009 | Directional control valve |
| | None |
| V | Integrated |

| | |
|-----|--------------------|
| 010 | Standard |
| NB3 | Based on ISO 15552 |

| | |
|------|---|
| 011 | Connection type |
| | Standard |
| P | Protected |
| P9 | Cable connector M16x1.5 |
| M12 | Plug M12, A-coded |
| VM12 | Prepared for expansion modules with plug M12, A-coded |

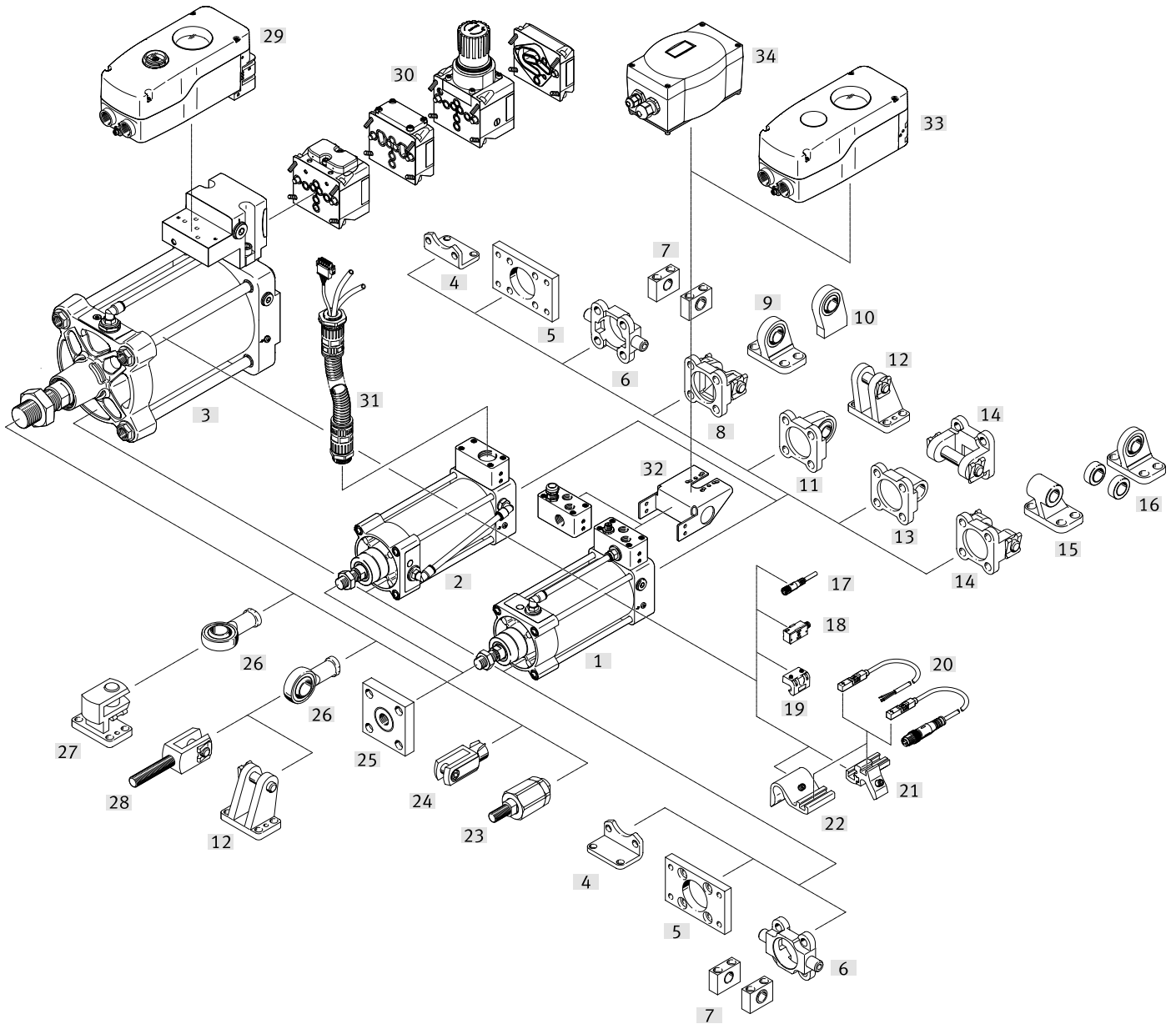
| | |
|-----|---|
| 012 | Connection type material |
| | Standard |
| B2 | Nickel-plated brass |
| V2 | Stainless steel (austenitic chromium-nickel/1.4301, 1.4303, 1.4306 (AISI 304L)) |

| | |
|-----|-----------------------|
| 013 | Safety position |
| | Piston rod advancing |
| R | Piston rod retracting |

| | |
|-----|-----------------------------------|
| 014 | Additional function |
| | Standard |
| A | Position feedback 4 ... 20 mA |
| T | Integrated transducer 4 ... 20 mA |

| | |
|-----|------------------|
| 015 | Pneumatic tubing |
| | Standard |
| M | Metal |

Peripherals overview DFPI based on ISO 15552



Mounting attachments and accessories

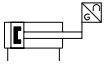
| | Description | → Page/Internet |
|--|--|-----------------|
| [1] Linear actuators DFPI-...-E-NB3... | Electrical connection via M12x1 plug, 5-pin or cable fitting M16x1.5, screw terminal | 9 |
| [2] Linear actuators DFPI-...-C1V-NB3 | Electrical, pneumatic connection using metal flange socket, pre-assembled connecting cable NHSB, see chapter on Accessories | 16 |
| [3] Linear actuators DFPI-...-ND2P-E-NB3VM12 | <ul style="list-style-type: none"> • Prepared for extension modules with M12 plug, A-coded • Piston \varnothing 160 ... 320 • Configurable product → 2 | 9 |
| [4] Foot mounting HNC/CRHNC | For bearing or end caps | 25 |
| Foot mounting HNG | For bearing or end caps, corresponds to MS1 to ISO 15552 | 25 |
| [5] Flange mounting FNC/CRFNG | For bearing or end caps | 27 |
| Flange mounting FNG | For bearing or end cap, corresponds to MF1/MF2 to ISO 15552 | 27 |
| [6] Trunnion flange ZNCF/CRZNG | For bearing or end caps | 28 |




Peripherals overview DFPI based on ISO 15552

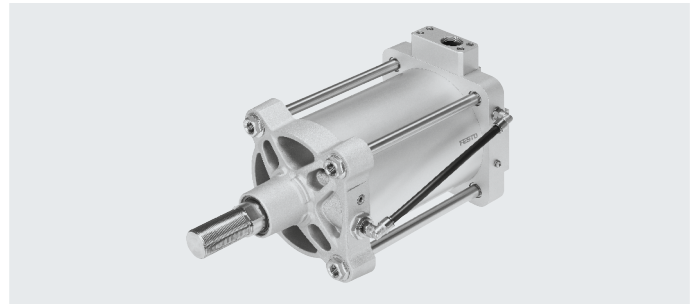
| Mounting attachments and accessories | | Description | → Page/Internet |
|--------------------------------------|-----------------------------------|--|-----------------|
| [7] | Trunnion support LNZG/CRLNZG | For trunnion flange ZNCF/CRZNG | 29 |
| [8] | Swivel flange SNC | For end caps | 30 |
| | Swivel flange SNG | For end caps | 30 |
| [9] | Clevis foot LSNB | With spherical bearing | 36 |
| [10] | Clevis foot LSNSG | Weld-on, with spherical bearing | 36 |
| [11] | Swivel flange SNCS | With spherical bearing for end caps | 32 |
| [12] | Clevis foot LBG | For swivel flange SNCS | 36 |
| [13] | Swivel flange SNCL | For end caps | 33 |
| | Swivel flange SNGL | For end caps, corresponds to MP2 to ISO 15552 | 33 |
| [14] | Swivel flange SNCB/SNCB-...-R3 | For end caps | 31 |
| | Swivel flange SNGB | For end caps, corresponds to MP2 to ISO 15552 | 31 |
| [15] | Clevis foot LNG/CRLNG | For swivel flange SNCB | 36 |
| | Clevis foot LN/LNG | For swivel flange SNGB | 36 |
| [16] | Clevis foot LSN | With spherical bearing | 36 |
| [17] | Connecting cable NEBU | For proximity switch | 39 |
| [18] | Proximity switch SMPO-1-H-B | For sensing the piston position | 39 |
| [19] | Mounting kit SMBS | For proximity switch SMPO-1-H-B | 39 |
| [20] | Proximity switch SMT-8M-A | Magneto-resistive, 5 ... 30 V DC, to EU Explosion Protection Directive (ATEX) | 52 |
| | Proximity switch CRSMT-8 | Magneto-resistive, corrosion-resistant, to EU Explosion Protection Directive (ATEX) | 38 |
| | Proximity switch SDBT | Magneto-resistive, NAMUR, to EU Explosion Protection Directive (ATEX) | 38 |
| [21] | Mounting kit SMBZ-8- ... | For proximity switch SME/SMT-8M, with piston diameter 100 | 38 |
| [22] | Sensor bracket DASP-M4-... | For proximity switch SME/SMT-8M, with piston diameter 125, 160, 200, 250, 320 | 38 |
| [23] | Self-aligning rod coupler FK/CRFK | To compensate for radial and angular deviations | 37 |
| [24] | Rod clevis SG/CRSG | Permits a swivelling movement of the cylinder in one plane | 37 |
| [25] | Coupling piece KSG | To compensate for radial deviations | 37 |
| [26] | Rod eye SGS/CRSGS | With spherical bearing | 37 |
| [27] | Right-angle clevis foot LQG | For rod eye SGS | 36 |
| [28] | Rod clevis SGA | With male thread | 37 |
| [29] | Positioner CMSH-SE-VDE2-D-... | For directly attaching a positioner in accordance with VDE/VDI 3847-2 | 39 |
| [30] | Valve terminal VTOP | For additional pneumatic functions | 39 |
| [31] | Connecting cable NHSB | For electrical and pneumatic connection of linear actuator DFPI-...P-... <ul style="list-style-type: none"> • 3-core, for DFPI-...-E-P • 5-core, for DFPI-...-C1V-P-A | 23 |
| [32] | Adapter kit DADG-AK-F6-A2 | Mounting bracket for mounting a positioner with interface to VDI/VDE 3845 or mounting with a hole spacing of 150 mm | 34 |
| [33] | Positioner CMSH-SE-VDE1-D-... | For attaching a positioner in accordance with VDE/VDI 3845-1 | 39 |
| [34] | Positioner CMSX-P-SE-C-U-F1-D-... | For attaching a positioner in accordance with VDE/VDI 3845-1 | 39 |

Datasheet

Function



-  - Piston \varnothing
100 ... 320 mm
-  - Stroke
40 ... 990 mm
-  - Force
4417 ... 46385 N


General technical data

| | | |
|--------------------------|------|---|
| Stroke | [mm] | 40 ... 990 |
| Operating mode | | Double-acting |
| Based on standard | | ISO 15552 |
| Cushioning | | No cushioning |
| Mounting position | | Any |
| Design | | Piston |
| | | Piston rod |
| | | Tie rod |
| | | Cylinder barrel |
| Position sensing | | Via integrated displacement encoder |
| Pneumatic connection | | |
| DFPI-...-E-NB3P... | | With specific accessories, for tubing O.D. 8 mm |
| DFPI-...-E-NB3M12 | | G3/8 |
| DFPI-...-E-NB3P9 | | G3/8 |
| DFPI-...-ND2P-E-NB3VM12 | | G1/2 for piston diameter 160 ... 320 |
| Electrical connection | | |
| DFPI-...-E-NB3P... | | With specific accessories, 3-pin, straight plug, screw terminal |
| DFPI-...-E-NB3M12B2 | | M12x1, 5-pin, straight plug, A-coded |
| DFPI-...-ND2P-E-NB3VM12 | | M12x1, 5-pin, straight plug, A-coded |
| DFPI-...-E-NB3M12V2 | | M12x1, 4-pin, straight plug, A-coded |
| DFPI-...-E-NB3P9 | | Cable connector M16x1.5, 3-pin, straight plug, screw terminal |
| DFPI-...-E-NB3P9 ...T... | | Cable connector M16x1.5, 2-pin, straight plug, screw terminal |

General electrical data

| | | | |
|--|---------------|---------------|----------------------|
| Measuring principle | | Potentiometer | |
| Displacement encoder | | | |
| Resistance value of displacement encoder (on TET) as a function of stroke length ¹⁾ | [k Ω] | 5 | Stroke \leq 290 mm |
| | [k Ω] | 10 | > 290 ... 590 mm |
| | [k Ω] | 20 | > 590 ... 990 mm |
| Recommended contact current | [μ A] | < 0.1 | |
| Max. short-time contact current | [mA] | 10 | |
| DFPI-...-E-NB3... | | | |
| Operating voltage range | [V DC] | 0 ... 15 | |
| Independent linearity | [%] | \pm 0.04 | |
| Repetition accuracy | [mm] | \pm 0.12 | |
| Hysteresis | [mm] | 0.33 | |
| DFPI-...-E-NB3 ...T... | | | |
| Power supply | | 2-wire | |
| Operating voltage range | [V DC] | 9 ... 30 | |
| Reverse polarity protection | | Yes | |
| Analogue output | [mA] | 4 ... 20 | |
| Independent linearity | [%] | \pm 0.05 | |
| Repetition accuracy | [mm] | 0.7 | |
| Hysteresis | [mm] | 0.4 | |

1) TET = theoretical electrical travel

Datasheet

| Operating and environmental conditions | | DFPI-...-E-NB3 ...T-... | DFPI-...-E-NB3... |
|--|-------|--|---|
| Type | | | |
| Operating pressure | [MPa] | 0.3 ... 0.8 | |
| | [bar] | 3 ... 8 | |
| Nominal operating pressure | [MPa] | 0.6 | |
| | [bar] | 6 | |
| Operating medium | | Compressed air to ISO 8573-1:2010 [7:4:4] | |
| Note on the operating/pilot medium | | Lubricated operation possible (required for further operation) | |
| Storage temperature | [°C] | -20 ... +80 | |
| Ambient temperature | [°C] | -20 ... +80 | |
| Relative humidity | [%] | 5 ... 100, condensing | |
| Degree of protection | | IP65, IP67, IP69K, NEMA 4 | |
| Vibration resistance to DIN/IEC 68, Part 2-6 | | Tested to severity level 2 | |
| Continuous shock resistance to DIN/IEC 68, Part 2-82 | | Tested to severity level 2 | |
| CE marking (see declaration of conformity) ¹⁾ | | To EU EMC Directive ²⁾ | - |
| | | To EU RoHS Directive | To EU RoHS Directive |
| | | - | To EU Explosion Protection Directive (ATEX) |
| Approval | | RMC | - |
| UKCA marking (see declaration of conformity) ¹⁾ | | To UK EX regulations | |
| KC marking | | KC EMC (KC certification number EMC/radio R-R-FTO-KC-2019-1020) | - |

1) Additional information: www.festo.com/catalogue/... → Support/Downloads.

2) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

| ATEX | |
|--|---------------------|
| ATEX category for gas | II 2G |
| Type of (ignition) protection for gas | Ex h IIC T4 Gb |
| ATEX category for dust | II 2D |
| Type of (ignition) protection for dust | Ex h IIIC T120°C Db |
| Explosion ambient temperature | -20°C ≤ Ta ≤ +60°C |

| Forces [N] and impact energy [J] | | | | | | |
|---|------|------|-------|-------|-------|-------|
| Piston ø | 100 | 125 | 160 | 200 | 250 | 320 |
| Theoretical force at 6 bar, advancing | 4712 | 7363 | 12064 | 18850 | 29452 | 48255 |
| Theoretical force at 6 bar, retracting | 4417 | 6881 | 11581 | 18080 | 28274 | 46385 |
| Max. impact energy at the end positions | 1.3 | 1.0 | 1.4 | 1.0 | 1.9 | 2.4 |

Permissible impact velocity:

$$v = \sqrt{\frac{2 \cdot E}{m_1 + m_2}}$$

v Permissible impact velocity

E Max. impact energy

m₁ Moving mass (actuator)

m₂ Moving payload

Maximum permissible mass:

$$m_2 = \frac{2 \cdot E}{v^2} - m_1$$

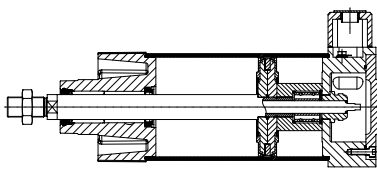
| Air consumption [l] | | | | | | |
|---|-------|-------|-------|-------|-------|-------|
| Piston ø | 100 | 125 | 160 | 200 | 250 | 320 |
| Air consumption, advancing, per 10 mm stroke | 0.549 | 0.859 | 1.407 | 2.119 | 3.436 | 5.63 |
| Air consumption, retracting, per 10 mm stroke | 0.515 | 0.803 | 1.351 | 2.111 | 3.299 | 5.412 |

Datasheet

| Weight [g] | 100 | 125 | 160 | 200 | 250 | 320 |
|--|------|------|-------|-------|-------|-------|
| Piston \varnothing | | | | | | |
| Basic weight With 0 mm stroke | 4900 | 7500 | 12800 | 18100 | 31100 | 57700 |
| Additional weight per 10 mm stroke | 90 | 134 | 200 | 238 | 358 | 582 |
| Moving mass with 0 mm stroke | 1060 | 1900 | 3700 | 4800 | 9300 | 16500 |
| Additional moving mass per 10 mm stroke | 28 | 53 | 89 | 89 | 134 | 227 |

Materials

Sectional view

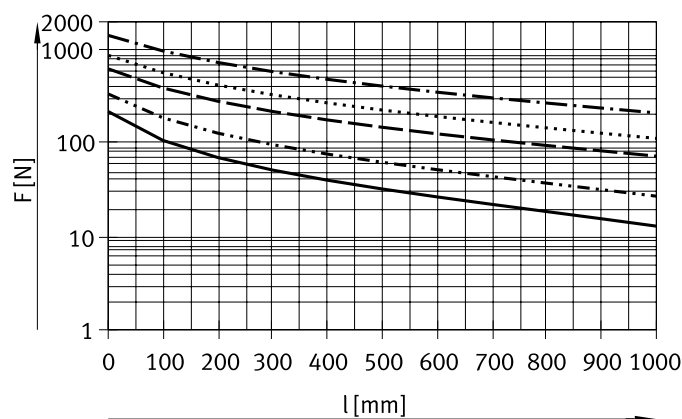


| | Piston \varnothing | |
|---|----------------------|--|
| [1] Piston rod | 100 ... 320 | High-alloy stainless steel |
| [2] Bottom cover | 100 ... 320 | Coated die-cast aluminium |
| [3] Cylinder barrel | 100 ... 320 | Smooth-anodised wrought aluminium alloy |
| [4] End cap | 100 ... 320 | Coated wrought aluminium alloy |
| - Tie rods | 100 ... 320 | High-alloy stainless steel |
| - Screws | 100 ... 320 | Coated steel |
| | | High-alloy stainless steel |
| - Piston rod wiper seal | 100 ... 125 | TPE-U (PU) |
| | 160 ... 320 | NBR |
| - M12 plug DFPI-...-E-NB3M12B2 | 100 ... 320 | Nickel-plated brass |
| - Cable connector DFPI-...-E-NB3P9B2 | 100 ... 320 | Nickel-plated brass |
| - Air supply for characteristic value M | 100 ... 320 | Stainless steel pipe or plastic tubing |
| - Static seals | 100 ... 320 | NBR |
| - Note on materials | 100 ... 320 | RoHS-compliant |
| | | Contains paint-wetting impairment substances |

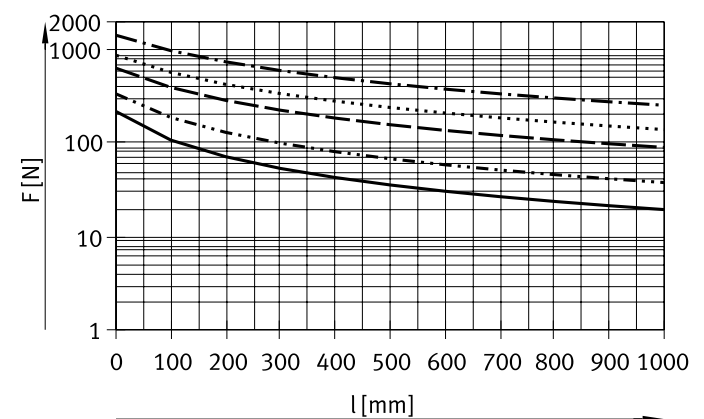
Max. lateral force as a function of stroke length l

The maximum lateral force (horizontal/vertical) applies to the static application. In closed-loop operation, the maximum lateral force needs to be adjusted to the type of control. If necessary, the piston rod must be guided to avoid system vibration.

Horizontal lateral force



Vertical lateral force



- $\varnothing 100$
- · - · - · $\varnothing 125$
- - - $\varnothing 160, 200$
- · · · · $\varnothing 250$
- · - · - · $\varnothing 320$

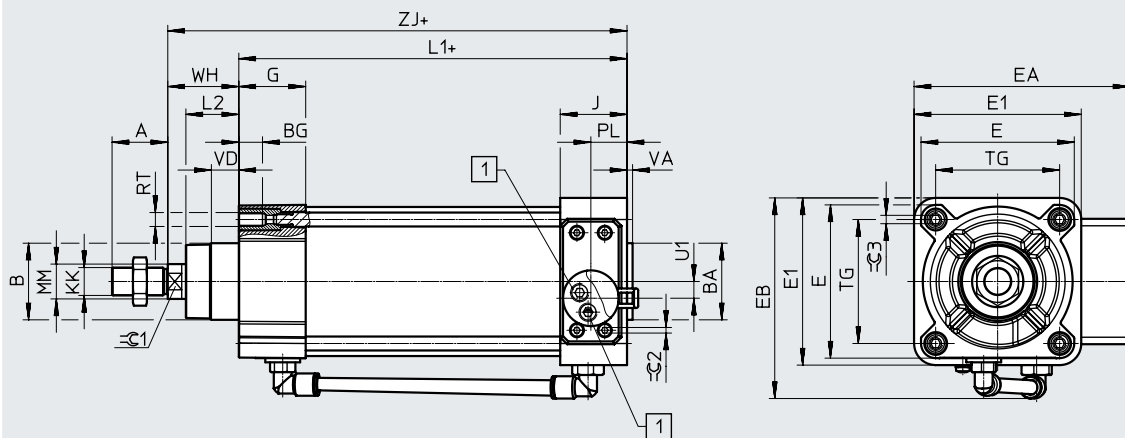
- $\varnothing 100$
- · - · - · $\varnothing 125$
- - - $\varnothing 160, 200$
- · · · · $\varnothing 250$
- · - · - · $\varnothing 320$

Datasheet

Dimensions

Download CAD data → www.festo.com

Piston \varnothing 100, 125



[1] Compressed air supply port – tubing 8 mm
+ = plus stroke length

| Piston \varnothing [mm] | A | B \varnothing | BA \varnothing d11 | BG | E | E1 | EA | EB | G | J | KK | L1 |
|------------------------------|----|--------------------|----------------------------|----|-----|-----|-----|-----|------|----|---------|-----|
| DFPI-100 | 40 | 55 | 55 | 17 | 110 | 120 | 155 | 146 | 48 | 48 | M20x1.5 | 179 |
| DFPI-125 | 54 | 60 | 60 | 20 | 136 | 145 | 180 | 173 | 44.7 | | M27x2 | 200 |

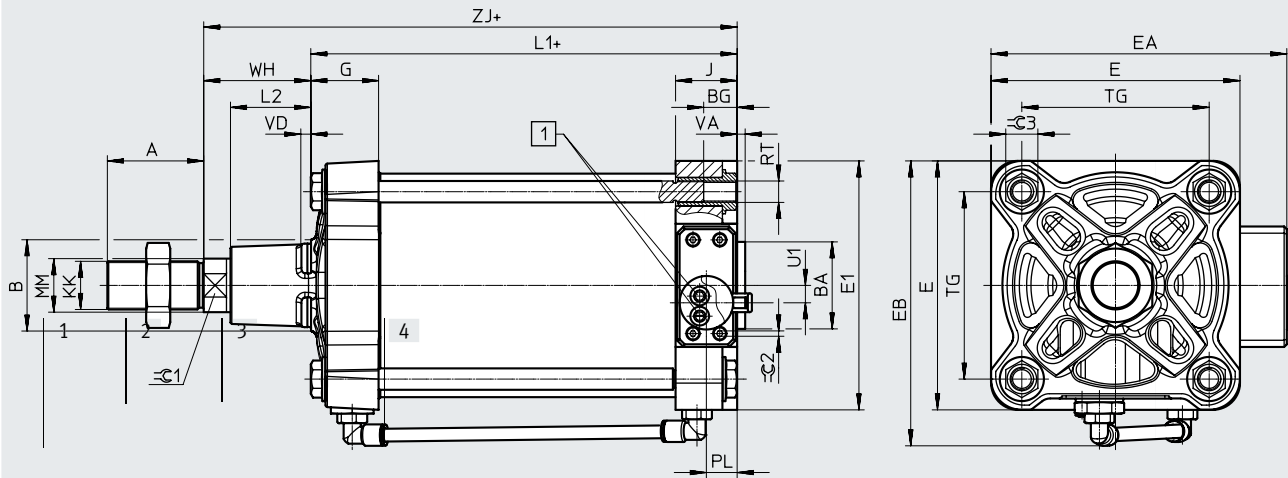
| Piston \varnothing [mm] | L2 | MM \varnothing | PL | RT | TG | U1 | VD | VA | WH | ZJ | $\varnothing C1$ | $\varnothing C2$ | $\varnothing C3$ |
|------------------------------|------|---------------------|----|-----|-----|----|------|----|--------------|-------|------------------|------------------|------------------|
| DFPI-100 | 38 | 25 | 26 | M10 | 89 | 12 | 19.2 | 4 | 51 \pm 1.8 | 229.7 | 22 | 4 | 6 |
| DFPI-125 | 45.5 | 32 | | M12 | 110 | 22 | 20.5 | 6 | 65 \pm 2.2 | 264.7 | 27 | | 8 |

Datasheet

Dimensions

Download CAD data → www.festo.com

Piston \varnothing 160, 200, 250, 320



[1] Compressed air supply port – tubing 8 mm
+ = plus stroke length

| Piston \varnothing [mm] | A | B \varnothing | BA \varnothing d11 | BG | E | E1 | EA | EB | G | J | KK | L1 |
|------------------------------|----|--------------------|----------------------------|----|-----|-----|-------|-----|----|------|-------|-------|
| DFPI-160 | 72 | 65 | 65 | 24 | 186 | 186 | 221 | 212 | 51 | 46 | M36x2 | 219 |
| DFPI-200 | | 75 | 75 | | 230 | 230 | 265 | 256 | | | | 47.2 |
| DFPI-250 | 84 | 90 | 90 | 25 | 284 | 270 | 312 | 312 | 52 | 51.5 | M42x2 | 254 |
| DFPI-320 | 96 | 110 | 110 | 28 | 347 | 342 | 378.5 | 379 | 56 | 58 | M48x2 | 281.2 |

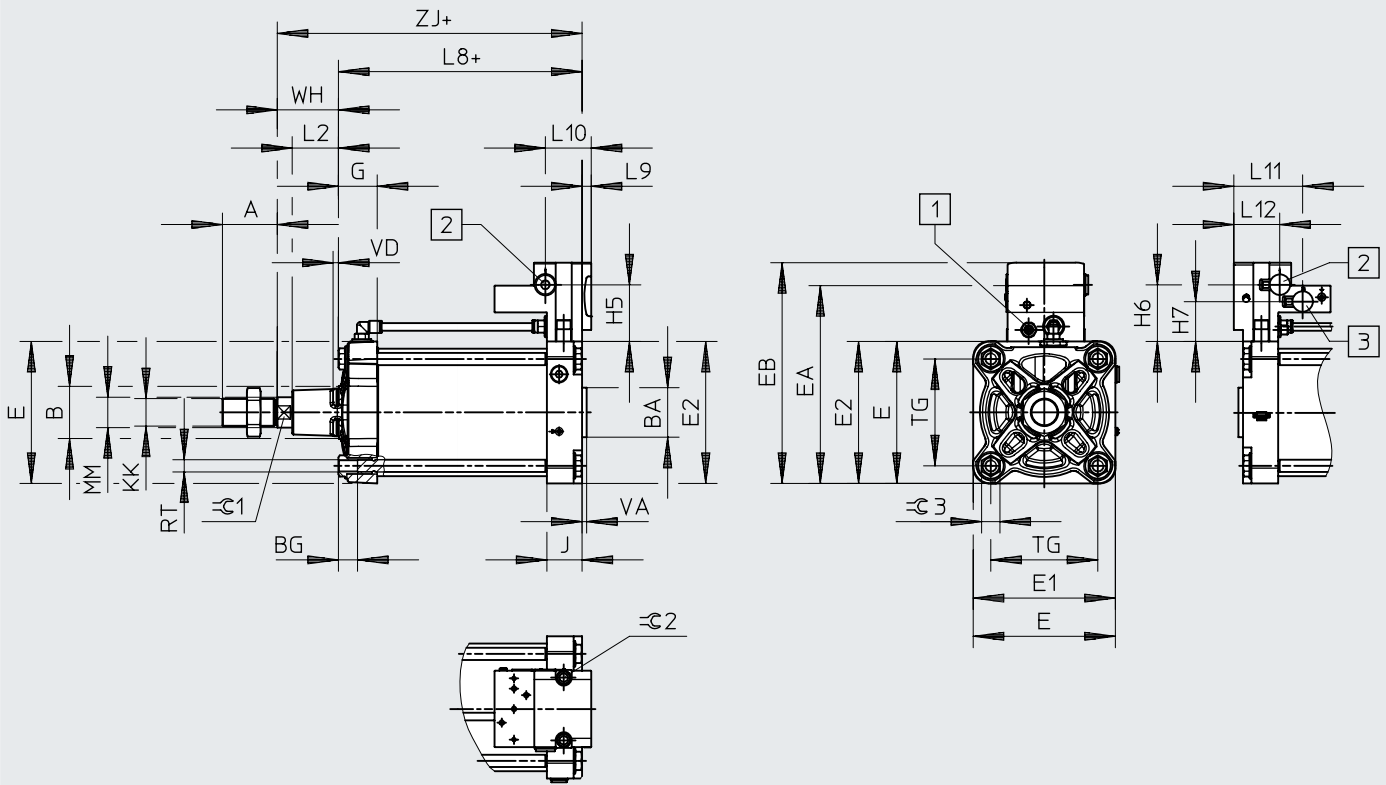
| Piston \varnothing [mm] | L2 | MM \varnothing | PL | RT | TG | U1 | VD | VA | WH | ZJ | \varnothing 1 | \varnothing 2 | \varnothing 3 |
|------------------------------|----|---------------------|------|-----|-----|----|------|----|-----|-------|-----------------|-----------------|-----------------|
| DFPI-160 | 60 | 40 | 23 | M16 | 140 | 13 | 7.5 | 6 | 80 | 298.6 | 36 | 4 | 24 |
| DFPI-200 | | | | | 175 | 32 | | | | | | | |
| DFPI-250 | 80 | 50 | 29.5 | M20 | 220 | 47 | 13.7 | 10 | 105 | 359 | 46 | 42 | |
| DFPI-320 | 90 | 63 | 36 | M24 | 270 | 62 | 10.7 | | 120 | 401.2 | 55 | | 50 |

Datasheet

Dimensions

Download CAD data → www.festo.com

Variants DFPI-...-ND2P-E-NB3VM12¹⁾



+ = plus stroke length

- [1] Displacement encoder connection, plug M12x1, A-coded
- [2] Pneumatic connection for supply air forwarding, with blanking plug
- [3] Pneumatic connection for exhaust, with protective cap

| | A | B | BA | BG | E | E1 | E2 | EA | EB | G | H5 | H6 | H7 | J | KK |
|-----------------------------|------|-----|-----|----|-----|-----|-------|-------|-------|------|----|----|----|------|-------|
| | -0.5 | | d11 | | | | | | | | | | | | |
| DFPI-160-...-ND2P-E-NB3VM12 | 72 | 65 | 65 | 24 | 186 | 186 | 186 | 259 | 289 | 51 | 74 | 74 | 52 | 46 | M36x2 |
| DFPI-200-...-ND2P-E-NB3VM12 | 72 | 75 | 75 | 24 | 230 | 230 | 227 | 300 | 330 | 47.2 | 74 | 74 | 52 | 46 | M36x2 |
| DFPI-250-...-ND2P-E-NB3VM12 | 84 | 90 | 90 | 25 | 284 | 270 | 277.6 | 350.6 | 380.6 | 52 | 74 | 74 | 52 | 51.5 | M42x2 |
| DFPI-320-...-ND2P-E-NB3VM12 | 86 | 110 | 110 | 28 | 347 | 340 | 348.5 | 421.5 | 451.5 | 56 | 74 | 74 | 52 | 58 | M48x2 |

| | L2 | L8 | L9 | L10 | L11 | L12 | MM | RT | TG | VD | VA | WH | ZJ | ⌀ 1 | ⌀ 2 | ⌀ 3 |
|-----------------------------|----|-------|-----|-----|-----|-----|----|-----|-----|------|----|------|-------|-----|-----|-----|
| | | | | | | | | | | | -1 | ±2.2 | | | | |
| DFPI-160-...-ND2P-E-NB3VM12 | 60 | 219 | 12 | 60 | 90 | 60 | 40 | M16 | 140 | 7.5 | 6 | 80 | 298.6 | 36 | 10 | 24 |
| DFPI-200-...-ND2P-E-NB3VM12 | 70 | 225 | 12 | 60 | 90 | 60 | 40 | M16 | 175 | 7.5 | 6 | 95 | 320 | 36 | 10 | 24 |
| DFPI-250-...-ND2P-E-NB3VM12 | 80 | 254 | 6.5 | 60 | 90 | 60 | 50 | M20 | 220 | 13.7 | 10 | 105 | 359 | 46 | 10 | 42 |
| DFPI-320-...-ND2P-E-NB3VM12 | 90 | 281.2 | 0 | 60 | 90 | 60 | 63 | M24 | 270 | 10.7 | 10 | 120 | 401.2 | 55 | 10 | 50 |

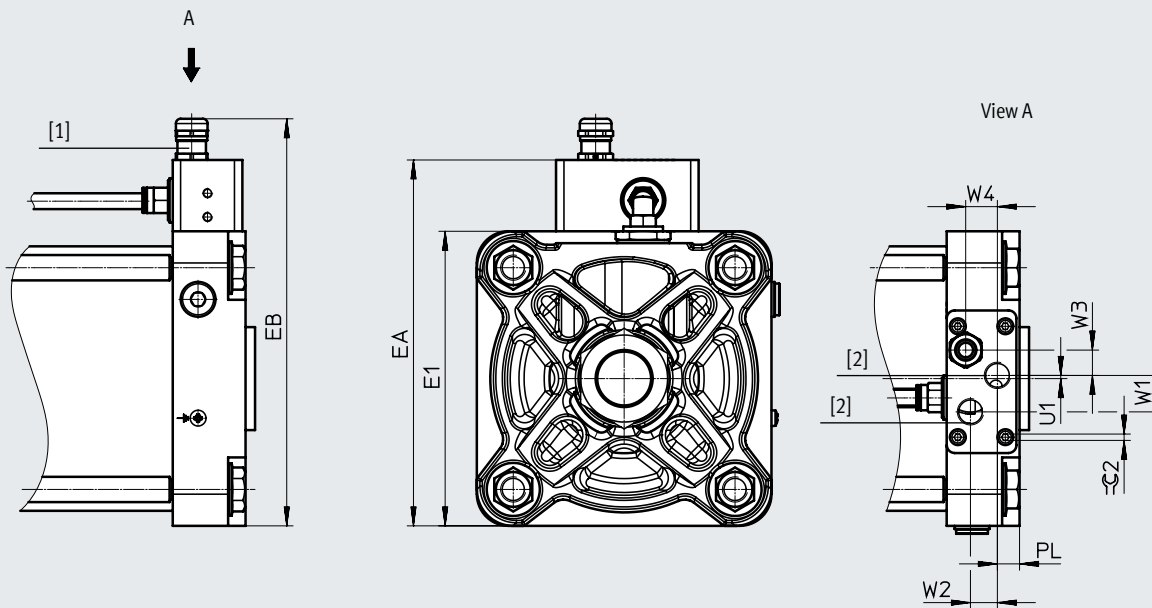
1) Configurable product → 2

Datasheet

Dimensions

Download CAD data → www.festo.com

Variants DFPI-...-E-NB3P9B2-... and DFPI-...-E-NB3M12B2-...



- [1] DFPI-...-P9B2-...: electrical connection: cable connector M16x1.5, 3-pin, straight plug, screw terminal
 DFPI-...-M12B2-...: electrical connection: M12x1, 5-pin, straight plug, A-coded
- [2] 2 pneumatic connection: G3/8

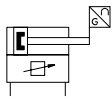
| Type | E1 | EA | EB | PL | U1 | W1 | W2 | W3 | W4 | $\approx \varnothing 2$ |
|------------------|-----|-------|-------|------|----|----|----|----|----|-------------------------|
| DFPI-100-...-P9 | 110 | 157 | 183.5 | 16 | 4 | 23 | 17 | 16 | 20 | 4 |
| DFPI-100-...-M12 | | | 170 | | | | | | | |
| DFPI-125-...-P9 | 136 | 183 | 209.5 | | 6 | | | | | |
| DFPI-125-...-M12 | | | 196 | | | | | | | |
| DFPI-160-...-P9 | 186 | 231 | 275.5 | 14 | 2 | | | | | |
| DFPI-160-...-M12 | | | 244 | | | | | | | |
| DFPI-200-...-P9 | 230 | 272 | 298.5 | | | | | | | |
| DFPI-200-...-M12 | | | 285 | | | | | | | |
| DFPI-250-...-P9 | 270 | 322.6 | 349.1 | 19.5 | 11 | | | | | |
| DFPI-250-...-M12 | | | 335.6 | | | | | | | |
| DFPI-320-...-P9 | 340 | 393.5 | 420 | 26 | | | | | | |
| DFPI-320-...-M12 | | | 406.5 | | | | | | | |




Ordering data

| | | Piston \varnothing [mm] | Part no. | Type |
|---|--|------------------------------|----------|----------------------------|
| <ul style="list-style-type: none"> • Linear actuators with integrated displacement encoder • Based on ISO 15552 | | 100 | 2185733 | DFPI-100- ... -ND2P-E-NB3P |
| | | 125 | 2207685 | DFPI-125- ... -ND2P-E-NB3P |
| | | 160 | 2208573 | DFPI-160- ... -ND2P-E-NB3P |
| | | 200 | 2209613 | DFPI-200- ... -ND2P-E-NB3P |
| | | 250 | 2210666 | DFPI-250- ... -ND2P-E-NB3P |
| | | 320 | 2186271 | DFPI-320- ... -ND2P-E-NB3P |

Datasheet

Function



-  - Piston \varnothing
100 ... 320 mm
-  - Stroke
40 ... 990 mm
-  - Force
4417 ... 46385 N



General technical data

| | | |
|---|------|-------------------------------------|
| Stroke | [mm] | 40 ... 990 |
| Operating mode | | Double-acting |
| Based on standard | | ISO 15552 |
| Cushioning | | No cushioning |
| Mounting position | | Any |
| Design | | Piston |
| | | Piston rod |
| | | Tie rod |
| | | Cylinder barrel |
| Position sensing | | Via integrated displacement encoder |
| Measuring principle of displacement encoder | | Potentiometer |
| Pneumatic connection | | With specific accessories |
| | | For tubing O.D. 8 mm |
| | | For tubing O.D. 10 mm |
| Electrical connection | | With specific accessories |
| | | 5-pin |
| | | Straight plug |
| | | Screw terminal |

General electrical data

| | | |
|-----------------------------|--------|---------------------------|
| Operating voltage range | [V DC] | 21.6 ... 26.4 |
| Nominal operating voltage | [V DC] | 24 |
| Setpoint input | [mA] | 4 ... 20 |
| Analogue output | [mA] | 4 ... 20 |
| Accuracy of analogue output | [%FS] | 1 |
| Max. current consumption | [mA] | 220 |
| Reverse polarity protection | | For operating voltage |
| | | For setpoint value |
| | | Initialisation connection |
| Positioning accuracy | [%FS] | 1 |
| Repetition accuracy | [%FS] | ± 1 |
| Size of dead space | [%FS] | 1 |
| Hysteresis | [%FS] | ± 1 |

Datasheet

| Operating and environmental conditions | | |
|--|--|-----------------------|
| Operating pressure | [MPa] | 0.3 ... 0.8 |
| | [psi] | 43.5 ... 116 |
| | [bar] | 3 ... 8 |
| Nominal operating pressure | [MPa] | 0.6 |
| | [psi] | 87 |
| | [bar] | 6 |
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] | |
| Note on the operating/pilot medium | Lubricated operation possible (required for further operation) | |
| Temperature of medium | [°C] | -5 ... +40 |
| Ambient temperature | [°C] | -5 ... +50 |
| Storage temperature | [°C] | -5 ... +50 |
| Relative humidity | [%] | 5 ... 100, condensing |
| Degree of protection | IP65, IP67, IP69K, NEMA 4 | |
| Vibration resistance to DIN/IEC 68, Part 2-6 | Tested to severity level 2 | |
| Continuous shock resistance to DIN/IEC 68, Part 2-82 | Tested to severity level 2 | |
| Approval | RCM | |
| UKCA marking (see declaration of conformity) ¹⁾ | To UK EMC regulations | |
| | To UK EX regulations | |
| | To UK RoHS regulations | |
| CE marking (see declaration of conformity) ¹⁾ | To EU EMC Directive ²⁾ | |
| | To EU Explosion Protection Directive (ATEX) | |
| | To EU RoHS Directive | |

1) Additional information: www.festo.com/catalogue/... → Support/Downloads.

2) For information about the area of use, see the EC declaration of conformity at: www.festo.com/catalogue/... → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

| ATEX | |
|---|------------------------|
| ATEX category for gas | II 3G |
| Type of (ignition) protection for gas | Ex ec IICT4 X Gc |
| ATEX category for dust | II 3D |
| Type of (ignition) protection for dust | Ex tc IIIC T120°C X Dc |
| Explosion ambient temperature | -5°C ≤ Ta ≤ +50°C |
| Explosion protection certification outside the EU | EPL Dc (GB) |
| | EPL Gc (GB) |

Datasheet

| Forces [N] | | | | | | |
|--|------|------|-------|-------|-------|-------|
| Piston Ø | 100 | 125 | 160 | 200 | 250 | 320 |
| Theoretical force at 6 bar, advancing | 4712 | 7363 | 12064 | 18850 | 29452 | 48255 |
| Theoretical force at 6 bar, retracting | 4417 | 6881 | 11581 | 18080 | 28274 | 46385 |

Maximum permissible mass:

$$m_2 = \frac{2 \cdot E}{v^2} - m_1$$

- v Permissible impact velocity
- E Max. impact energy
- m₁ Moving mass (actuator)
- m₂ Moving payload

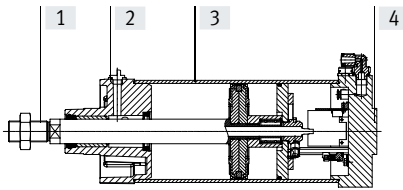
| Air consumption [l] | | | | | | |
|---|-------|-------|-------|-------|-------|-------|
| Piston Ø | 100 | 125 | 160 | 200 | 250 | 320 |
| Air consumption, advancing, per 10 mm stroke | 0.549 | 0.859 | 1.407 | 2.199 | 3.436 | 5.63 |
| Air consumption, retracting, per 10 mm stroke | 0.515 | 0.803 | 1.351 | 2.111 | 3.299 | 5.412 |

| Weight [g] | | | | | | |
|---|------|------|-------|-------|-------|-------|
| Piston Ø | 100 | 125 | 160 | 200 | 250 | 320 |
| Basic weight with 0 mm stroke | 5280 | 7950 | 14330 | 20410 | 35370 | 57550 |
| Additional weight per 10 mm stroke | 90 | 134 | 200 | 238 | 358 | 582 |
| Moving mass with 0 mm stroke | 1060 | 1900 | 3700 | 4800 | 9300 | 16500 |
| Additional moving mass per 10 mm stroke | 28 | 53 | 89 | 89 | 134 | 227 |

Datasheet

Materials

Sectional view



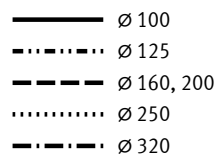
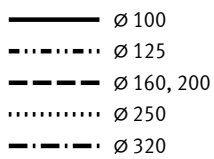
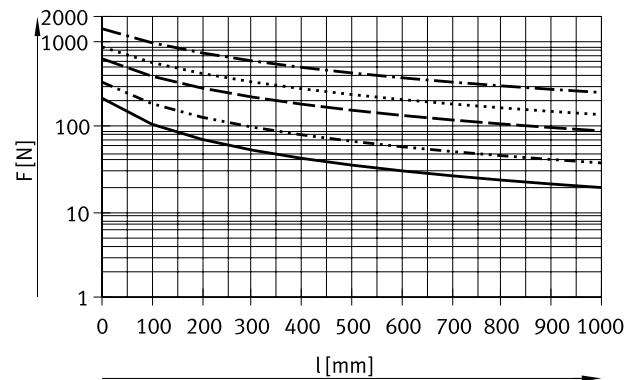
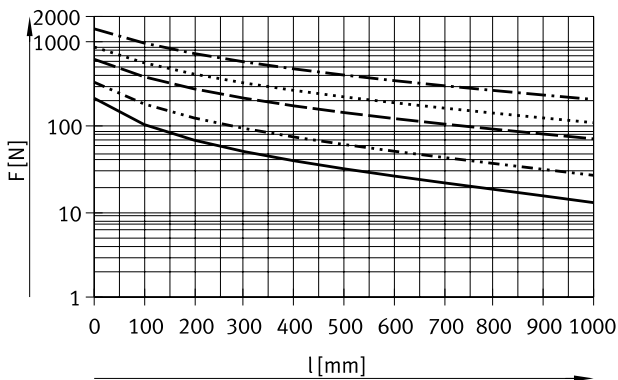
| | Piston \varnothing | |
|-------------------------|----------------------|--|
| [1] Piston rod | 100 ... 320 | High-alloy stainless steel |
| [2] Bottom cover | 100 ... 320 | Coated die-cast aluminium |
| [3] Cylinder barrel | 100 ... 320 | Smooth-anodised wrought aluminium alloy |
| [4] End cap | 100 ... 320 | Coated wrought aluminium alloy |
| - Tie rods | 100 ... 200 | High-alloy stainless steel |
| - Screws | 100 ... 320 | Coated steel |
| | | High-alloy stainless steel |
| - Piston rod wiper seal | 100 | TPE-U (PU) |
| | 125 ... 320 | NBR |
| - Static seals | 100 ... 320 | NBR |
| - Note on materials | 100 ... 320 | RoHS-compliant |
| | | Contains paint-wetting impairment substances |

Max. lateral force as a function of stroke length l

The maximum lateral force (horizontal/vertical) applies to the static application. In closed-loop operation, the maximum lateral force needs to be adjusted to the type of control. If necessary, the piston rod must be guided to avoid system vibration.

Horizontal lateral force

Vertical lateral force

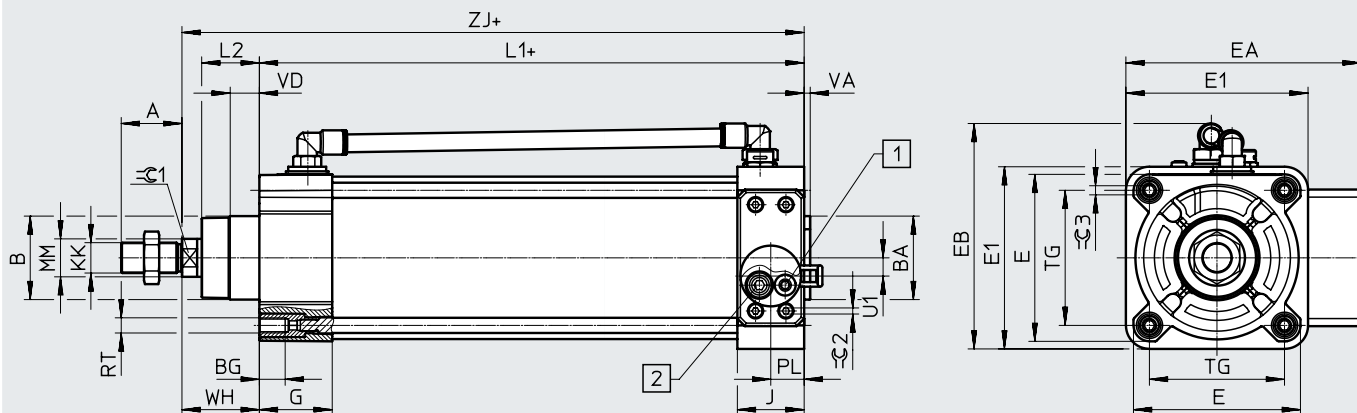


Datasheet

Dimensions

Download CAD data → www.festo.com

Piston ø 100, 125



- [1] Compressed air supply port – tubing 8 mm
- [2] Exhaust – tubing 10 mm
- + = plus stroke length

| Piston ø [mm] | A | B ø | BA ø d11 | BG | E | E1 | EA | EB | G | J | KK | L1 |
|------------------|----|--------|----------------|----|-----|-----|-----|-----|------|----|---------|-------|
| DFPI-100 | 40 | 55 | 55 | 17 | 110 | 120 | 155 | 146 | 48 | 44 | M20x1.5 | 258.9 |
| DFPI-125 | 54 | 60 | 60 | 20 | 136 | 145 | 180 | 173 | 44.7 | | M27x2 | 254.4 |

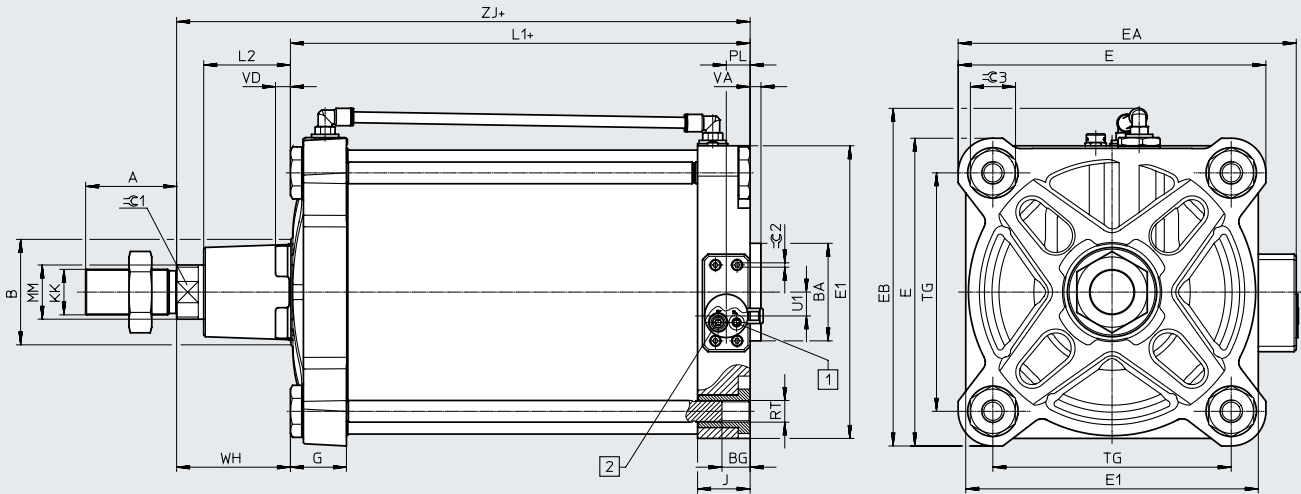
| Piston ø [mm] | L2 | MM ø | PL | RT | TG | U1 | VD | VA | WH | ZJ | ≅1 | ≅2 | ≅3 |
|------------------|------|---------|----|-----|-----|----|------|----|--------|-------|----|----|----|
| DFPI-100 | 38 | 25 | 22 | M10 | 89 | 12 | 19.2 | 4 | 51±1.8 | 309.9 | 22 | 4 | 6 |
| DFPI-125 | 45.5 | 32 | | M12 | 110 | 2 | 20.5 | 6 | 65±2.2 | 319.4 | 27 | | 8 |

Datasheet

Dimensions

Piston \varnothing 160, 200, 250, 320

Download CAD data \rightarrow www.festo.com

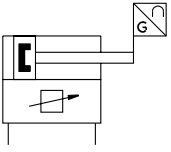
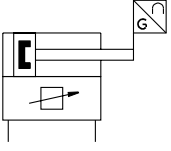


- [1] Compressed air supply port – tubing 8 mm
- [2] Exhaust – tubing 10 mm
- + = plus stroke length

| Piston \varnothing [mm] | A | B \varnothing | BA \varnothing d11 | BG | E | E1 | EA | EB | G | J | KK | L1 |
|------------------------------|----|--------------------|----------------------------|----|-----|-----|-------|-----|----|------|-------|-------|
| DFPI-160 | 72 | 65 | 65 | 24 | 186 | 186 | 221 | 212 | 51 | 46 | M36x2 | 291.8 |
| DFPI-200 | | 75 | 75 | | 230 | 230 | 265 | 256 | | | | 47.2 |
| DFPI-250 | 84 | 90 | 90 | 25 | 284 | 270 | 312 | 312 | 52 | 48.5 | M42x2 | 324.4 |
| DFPI-320 | 96 | 110 | 110 | 28 | 347 | 342 | 378.5 | 379 | 56 | 46 | M48x2 | 351.4 |

| Piston \varnothing [mm] | L2 | MM \varnothing | PL | RT | TG | U1 | VD | VA | WH | ZJ | \approx C1 | \approx C2 | \approx C3 |
|------------------------------|----|---------------------|------|-----|-----|----|------|----|-----|-------|--------------|--------------|--------------|
| DFPI-160 | 60 | 40 | 22 | M16 | 140 | 12 | 7.5 | 6 | 80 | 371.8 | 36 | 4 | 24 |
| DFPI-200 | 70 | | | | 175 | 32 | | | | | | | |
| DFPI-250 | 80 | 50 | 22.5 | M20 | 220 | 22 | 13.7 | 10 | 105 | 429.2 | 46 | 55 | 42 |
| DFPI-320 | 90 | 63 | | | 270 | 52 | | | | | | | 10.7 |

Datasheet

| Ordering data | | Piston ø [mm] | Part no. | Type |
|--|-----|------------------|---------------------------------------|------|
| Safety position advancing | | | | |
|  <ul style="list-style-type: none"> • Linear actuators with integrated positioner • Based on ISO 15552 | 100 | 2184841 | DFPI-100-...-ND2P-C1V-NB3P-A | |
| | 125 | 2180905 | DFPI-125-...-ND2P-C1V-NB3P-A | |
| | 160 | 2201101 | DFPI-160-...-ND2P-C1V-NB3P-A | |
| | 200 | 2206373 | DFPI-200-...-ND2P-C1V-NB3P-A | |
| | 250 | 2200311 | DFPI-250-...-ND2P-C1V-NB3P-A | |
| | 320 | 2185309 | DFPI-320-...-ND2P-C1V-NB3P-A | |
| Safety position retracting | | | | |
|  <ul style="list-style-type: none"> • Linear actuators with integrated positioner • Based on ISO 15552 | 100 | 4588304 | DFPI-100-...-ND2P-C1V-NB3P-R-A | |
| | 125 | 4588636 | DFPI-125-...-ND2P-C1V-NB3P-R-A | |
| | 160 | 4588972 | DFPI-160-...-ND2P-C1V-NB3P-R-A | |
| | 200 | 4587974 | DFPI-200-...-ND2P-C1V-NB3P-R-A | |
| | 250 | 4591209 | DFPI-250-...-ND2P-C1V-NB3P-R-A | |
| | 320 | 4591205 | DFPI-320-...-ND2P-C1V-NB3P-R-A | |

Accessories

Connecting cable NHSB

- Pre-assembled connecting cable
- Fits linear actuators DFPI-...-E-P-... and DFPI-...-C1V-P-...
- Cable lengths 5, 10 and 15 m



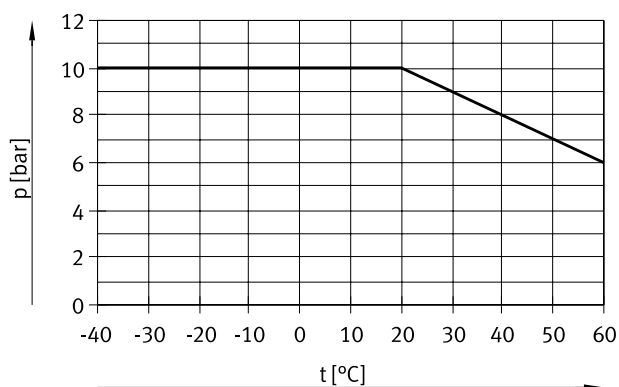
| General technical data | | | |
|---------------------------|--------------------|----------------------|-----------------------|
| Connecting cable | [mm ²] | 3x 0.75 | 5x 0.75 |
| Mounting position | | Any | |
| Electrical connection 1 | | Straight plug, 3-pin | Straight plug, 5-pin |
| Electrical connection 2 | | Open end, 3-core | Open end, 5-core |
| Min. cable bending radius | [mm] | 100 | |
| Pneumatic connection | | For tubing O.D. 8 mm | |
| | | – | For tubing O.D. 10 mm |

| Operating and environmental conditions | | | |
|--|--------|---|--|
| Ambient temperature | [°C] | –20 ... +60 | |
| Ambient temperature with flexible cable installation | [°C] | –5 ... +60 | |
| Operating voltage range | [V DC] | 0 ... 30 | |
| Operating medium | | Compressed air to ISO 8573-1:2010 [7:4:4] | |
| Note on the operating/pilot medium | | Lubricated operation possible | |
| Degree of protection | | IP65, IP67, IP69K, NEMA 4 | |
| Relative humidity | [%] | 5 ... 100, condensing | |

| Materials | |
|--------------------|----------------|
| Protective conduit | PA |
| Conduit fitting | PA |
| Cable sheath | PVC |
| Seals | TPE |
| Note on materials | RoHS-compliant |

Operating pressure [bar] as a function of operating temperature [°C]

NHSB-A1-...

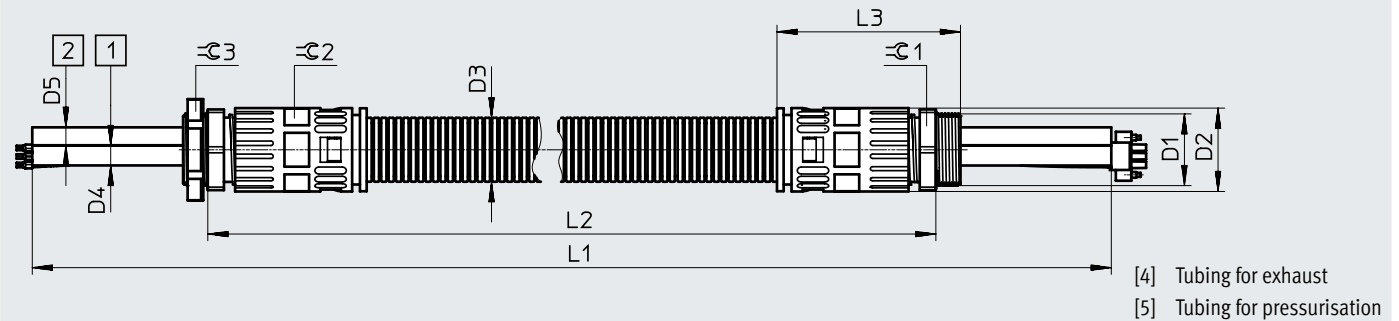


Accessories

Dimensions

Download CAD data → www.festo.com

3-core

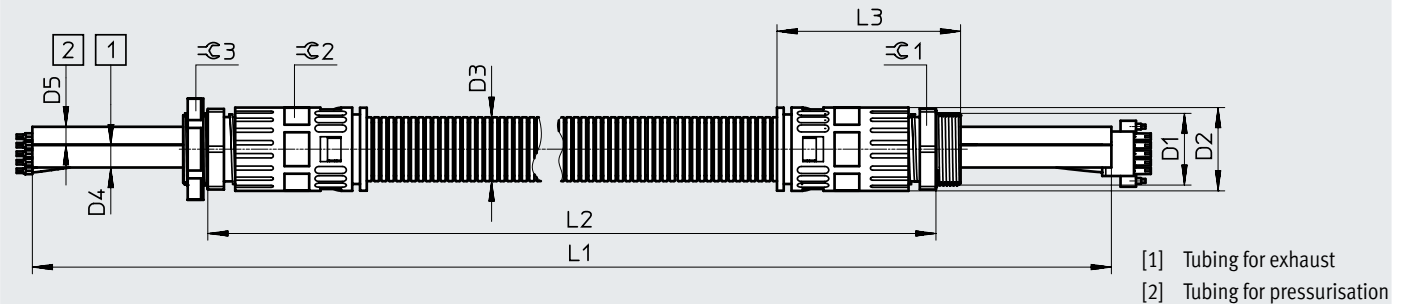


| Type | D1 | D2 ∅ | D3 ∅ | D4 ∅ | D5 ∅ | L1 ±25 | L2 ±25 | L3 | ∅ 1 | ∅ 2 | ∅ 3 |
|-------------------------------|---------|---------|---------|---------|---------|-----------|-----------|----|-----|-----|-----|
| NHSB-A1-0.6-BLG3-LE3-PU8-2xBB | M32x1.5 | 37 | 28.5 | 8 | 8 | 1400 | 600 | 82 | 36 | 34 | 41 |
| NHSB-A1-5-BLG3-LE3-PU8-2xBB | | | | | | 6100 | 5000 | | | | |
| NHSB-A1-10-BLG3-LE3-PU8-2xBB | | | | | | 11100 | 10000 | | | | |
| NHSB-A1-15-BLG3-LE3-PU8-2xBB | | | | | | 16100 | 15000 | | | | |

Dimensions

Download CAD data → www.festo.com

5-core



| Type | D1 | D2 ∅ | D3 ∅ | D4 ∅ | D5 ∅ | L1 ±25 | L2 ±25 | L3 | ∅ 1 | ∅ 2 | ∅ 3 |
|------------------------------|---------|---------|---------|---------|---------|-----------|-----------|----|-----|-----|-----|
| NHSB-A1-5-BLG5-LE5-PU8-2xBB | M32x1.5 | 37 | 28.5 | 10 | 8 | 6100 | 5000 | 82 | 36 | 34 | 41 |
| NHSB-A1-10-BLG5-LE5-PU8-2xBB | | | | | | 11100 | 10000 | | | | |
| NHSB-A1-15-BLG5-LE5-PU8-2xBB | | | | | | 16100 | 15000 | | | | |

Ordering data – Connecting cable

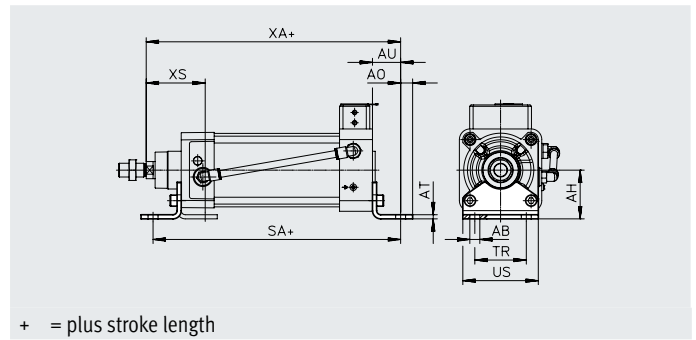
Datasheets → Internet: nhsb

| | Electrical connection 1 | Electrical connection 2 | Length [m] | Cable composition [mm ²] | Weight [g] | Part no. | Type |
|---|----------------------------|----------------------------|---------------|--|---------------|----------|-------------------------------|
| 3-core, for DFPI- ... -E-P-... | | | | | | | |
| | Straight plug, 3-pin | Open end, 3-core | 0.6 | 3x 0.75 | 280 | 3673475 | NHSB-A1-0.6-BLG3-LE3-PU8-2XBB |
| | | | 5 | | 1250 | 1686608 | NHSB-A1-5-BLG3-LE3-PU8-2XBB |
| | | | 10 | | 2500 | 1686609 | NHSB-A1-10-BLG3-LE3-PU8-2XBB |
| | | | 15 | | 3750 | 1686610 | NHSB-A1-15-BLG3-LE3-PU8-2XBB |
| 5-core, for DFPI- ... -C1V-P-... | | | | | | | |
| | Straight plug, 5-pin | Open end, 5-core | 5 | 5x 0.75 | 1250 | 1585793 | NHSB-A1-5-BLG5-LE5-PU8-2XBB |
| | | | 10 | | 2500 | 1585794 | NHSB-A1-10-BLG5-LE5-PU8-2XBB |
| | | | 15 | | 3750 | 1585795 | NHSB-A1-15-BLG5-LE5-PU8-2XBB |

Accessories

Foot mounting HNC/CRHNC

Material:
HNC: Galvanised steel
CRHNC: High-alloy steel



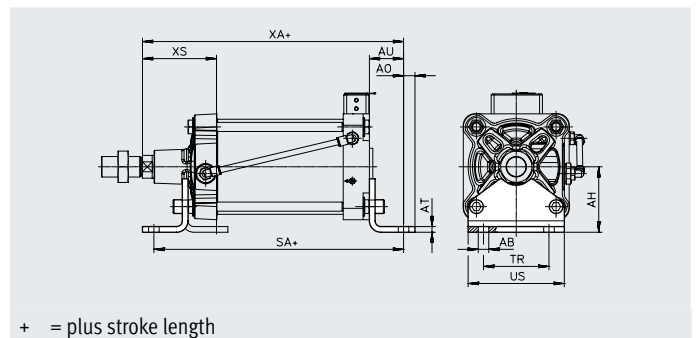
| Dimensions | | | | | | | | | | | |
|-------------------|------------------|----|------|----|----|-----|----|-----|-------|-----|--|
| For \varnothing | AB \varnothing | AH | AO | AT | AU | SA | TR | US | XA | XS | |
| [mm] | | | | | | | | | | | |
| 100 | 14.5 | 71 | 17.5 | 6 | 41 | 261 | 75 | 110 | 270.7 | 86 | |
| 125 | 16.5 | 90 | 22 | 8 | 45 | 290 | 90 | 131 | 309.7 | 102 | |

| Ordering data | | | | | | | | | |
|-------------------|-------------------|------------|---------------|--------------------|---------------------------|------------|---------------|--------------------|--|
| For \varnothing | Basic version | | | | High corrosion protection | | | | |
| | CRC ¹⁾ | Weight [g] | Part no. | Type ²⁾ | CRC ¹⁾ | Weight [g] | Part no. | Type ²⁾ | |
| [mm] | | | | | | | | | |
| 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 can occur. External visible parts with primarily decorative surface requirements that are in direct contact with the normal surrounding 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, e.g. in the chemical or food industries. Such applications may need to be supported with special tests
(→ also FN 940082) using appropriate media.
- 2) Suitable for ATEX (areas)

Foot mounting HNG

Material:
Galvanised steel



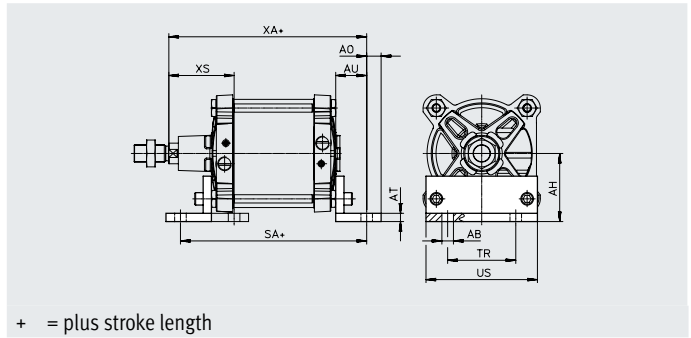
| Dimensions and ordering data | | | | | | | | | | | | | | |
|------------------------------|------------------|-----|----|----|----|-----|-----|-----|-------|-----|-------------------|------------|--------------|----------------|
| For \varnothing | AB \varnothing | AH | AO | AT | AU | SA | TR | US | XA | XS | CRC ¹⁾ | Weight [g] | Part no. | Type |
| [mm] | | | | | | | | | | | | | | |
| 160 | 18.5 | 115 | 20 | 10 | 60 | 339 | 115 | 169 | 358.6 | 130 | 2 | 3931 | 34476 | HNG-160 |
| 200 | 24 | 135 | 30 | 12 | 70 | 365 | 135 | 214 | 390 | 153 | 2 | 6896 | 34477 | HNG-200 |

- 1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with the normal surrounding industrial environment.

Accessories

Foot mounting HNG

Material:
Galvanised steel



Dimensions and ordering data

| For \varnothing [mm] | AB \varnothing | AH | AO | AT | AU | D1 \varnothing | SA | T1 | TR | US | XA | XS | CRC ¹⁾ | Weight [g] | Part no. | Type |
|---------------------------|---------------------|-----|----|----|----|---------------------|-------|----|-----|-----|-------|-----|-------------------|---------------|---------------|----------------|
| 250 | 28 | 165 | 35 | 20 | 75 | – | 404 | – | 165 | 270 | 434 | 160 | 2 | 17084 | 157510 | HNG-250 |
| 320 | 35 | 200 | 40 | 25 | 85 | 60 | 451.2 | 23 | 200 | 340 | 486.2 | 180 | 2 | 29968 | 157511 | HNG-320 |

1)

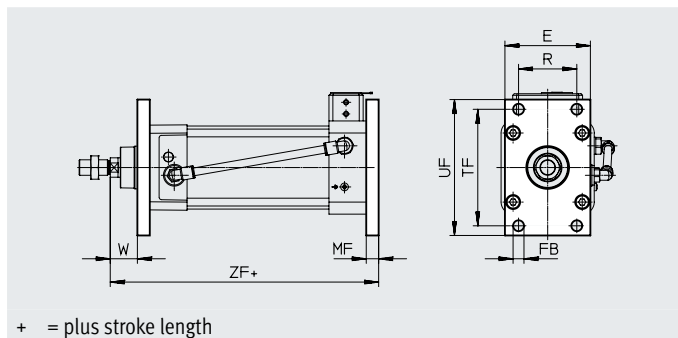
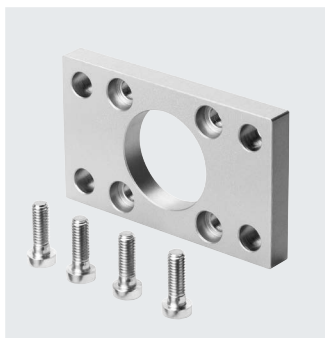
Corrosion resistance class CRC 2 to Festo standard FN 940070

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

Accessories

Flange mounting FNC/CRFNG

Material:
 FNC: Galvanised steel
 CRFNG: high-alloy steel
 RoHS-compliant



+ = plus stroke length

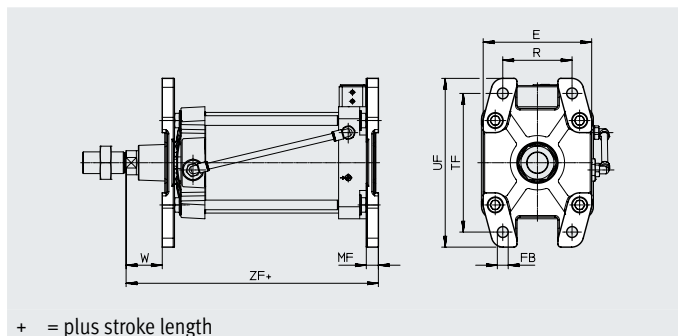
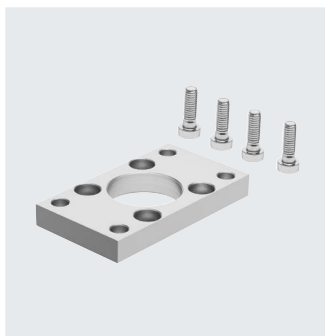
| Dimensions | | | | | | | | |
|-------------------|-----|------------------|----|----|-----|-----|----|-------|
| For \varnothing | E | FB \varnothing | MF | R | TF | UF | W | ZF |
| [mm] | | | | | | | | |
| 100 | 110 | 14 | 16 | 75 | 150 | 175 | 35 | 245.7 |
| 125 | 132 | 16 | 20 | 90 | 180 | 210 | 45 | 284.7 |

| Ordering data | | | | | | | | |
|-------------------|-------------------|------------|---------------|--------------------|---------------------------|------------|---------------|--------------------|
| For \varnothing | Basic version | | | | High corrosion protection | | | |
| | CRC ¹⁾ | Weight [g] | Part no. | Type ²⁾ | CRC ¹⁾ | Weight [g] | Part no. | Type ²⁾ |
| [mm] | | | | | | | | |
| 100 | 1 | 2041 | 174381 | FNC-100 | 4 | 2054 | 161851 | CRFNG-100 |
| 125 | 1 | 3775 | 174382 | FNC-125 | 4 | 3787 | 185363 | CRFNG-125 |

- Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. Dry indoor applications, as well as protection during transport and storage. Also applies to parts behind covers, in non-visible internal areas, or parts that are covered in the application (e.g. drive trunnions).
 Corrosion resistance class CRC 4 to Festo standard FN 940070
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be supported with special tests
 (→ also FN 940082) using appropriate media.
- Suitable for ATEX (areas)

Flange mounting FNG

Material:
 Painted spheroidal graphite cast iron



+ = plus stroke length

| Dimensions and ordering data | | | | | | | | | | | | | |
|------------------------------|-----|------------------|----|-----|-----|-----|----|-------|-------------------|------------|---------------|----------------|--|
| For \varnothing | E | FB \varnothing | MF | R | TF | UF | W | ZF | CRC ¹⁾ | Weight [g] | Part no. | Type | |
| [mm] | | | | | | | | | | | | | |
| 160 | 180 | 18 | 20 | 115 | 230 | 280 | 60 | 318.6 | 1 | 3550 | 34478 | FNG-160 | |
| 200 | 220 | 22 | 25 | 135 | 270 | 320 | 70 | 345 | 1 | 5321 | 34479 | FNG-200 | |
| 250 | 270 | 26 | 25 | 165 | 330 | 390 | 80 | 384 | 1 | 8657 | 157508 | FNG-250 | |
| 320 | 340 | 33 | 30 | 200 | 400 | 470 | 90 | 431.2 | 1 | 15109 | 157509 | FNG-320 | |

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

Accessories

Trunnion flange ZNCF/CRZNG

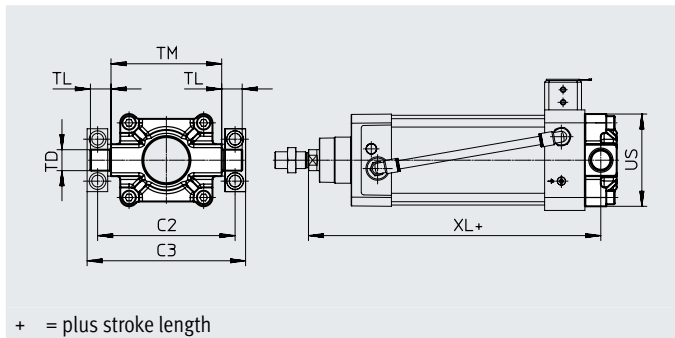
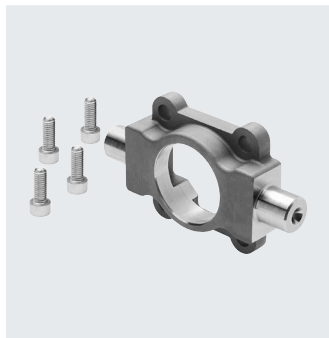
Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel

casting

RoHS-compliant



+ = plus stroke length

| Dimensions | | | | | | | |
|-------------------|-----|-----|---------------------------|------|-----|-----|-------|
| For \varnothing | C2 | C3 | TD \varnothing e9 | TL | TM | US | XL |
| [mm] | | | | | | | |
| 100 | 164 | 189 | 25 | 24.5 | 132 | 110 | 248.7 |
| 125 | 192 | 217 | | | 160 | 131 | 289.7 |

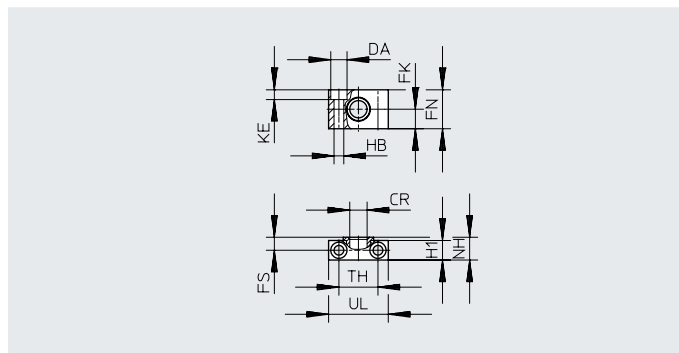
| Ordering data | | | | | | | | |
|-------------------|-------------------|------------|---------------|--------------------|---------------------------|------------|---------------|--------------------|
| For \varnothing | Basic version | | | | High corrosion protection | | | |
| | CRC ¹⁾ | Weight [g] | Part no. | Type ²⁾ | CRC ¹⁾ | Weight [g] | Part no. | Type ²⁾ |
| [mm] | | | | | | | | |
| 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 can occur. External visible parts with primarily decorative surface requirements that are in direct contact with the normal surrounding 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, e.g. in the chemical or food industries. Such applications may need to be supported with special tests
 (→ also FN 940082) using appropriate media.
- 2) Suitable for ATEX (areas)

Accessories

Trunnion support LNZG

Material mounting:
 ∅ 100, 125: Anodised wrought aluminium alloy
 ∅ 160 ... 320: Galvanised steel
 Material of bearing:
 ∅ 100 ... 200: Plastic
 ∅ 250, 320: Bronze
 RoHS-compliant

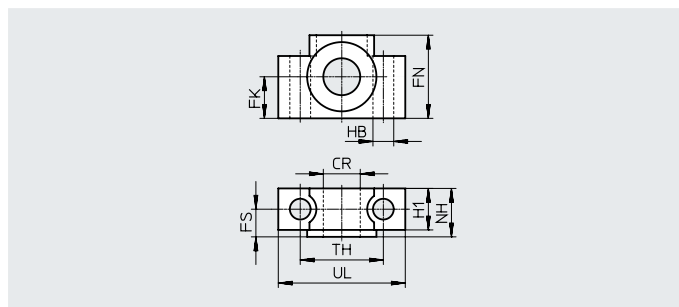


| Dimensions and ordering data | | | | | | | | | | | | | | | | |
|------------------------------|---------|----------------|---------|----|------|------|----------------|------|------|----------|-----|-------------------|---------------|---------------|----------------------|--|
| For ∅ [mm] | CR ∅ | DA ∅ H13 | FK | FN | FS | H1 | HB ∅ H13 | KE | NH | TH | UL | CRC ¹⁾ | Weight [g] | Part no. | Type | |
| 100, 125 | 25D11 | 20 | 25 ±0.1 | 50 | 16 | 24.5 | 14 | 13 | 28.5 | 50 ±0.2 | 75 | 2 | 306 | 32962 | LNZG-10 0/125 | |
| 160, 200 | 32D11 | 26 | 30 ±0.2 | 60 | 22.5 | 36 | 18 | 17 | 40 | 60 ±0.3 | 92 | 2 | 659 | 35780 | LNZG-16 0/200 | |
| 250 | 40G7 | 33 | 35 ±0.2 | 70 | 27.5 | 45 | 22 | 21.5 | 50 | 90 ±0.3 | 140 | 2 | 2218 | 157516 | LNZG-250 | |
| 320 | 50G7 | 40 | 40 ±0.2 | 80 | 32.5 | 55 | 26 | 25.5 | 60 | 100 ±0.3 | 150 | 2 | 2934 | 157517 | LNZG-320 | |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
 Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with the normal surrounding industrial environment.

Trunnion support CRLNZG

Material:
 High-alloy steel
 RoHS-compliant



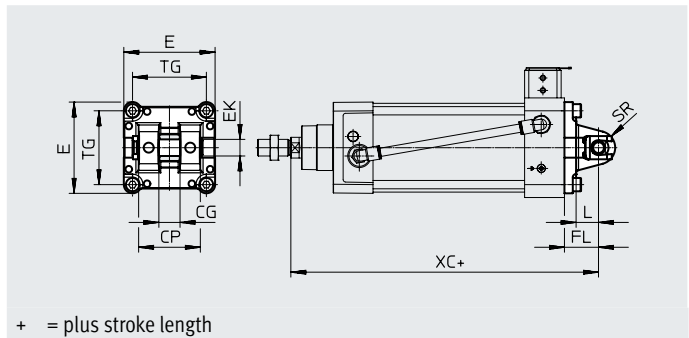
| Dimensions and ordering data | | | | | | | | | | | | | | | | |
|------------------------------|----------------|------------|----|----|------|----------------|------|------------|----|-------------------|---------------|---------------|------------------------|--|--|--|
| For ∅ [mm] | CR ∅ D11 | FK ±0.1 | FN | FS | H1 | HB ∅ H13 | NH | TH ±0.2 | UL | CRC ¹⁾ | Weight [g] | Part no. | Type | | | |
| 100, 125 | 25 | 25 | 50 | 16 | 24.5 | 14 | 28.5 | 50 | 75 | 4 | 739 | 161877 | CRLNZG-10 0/125 | | | |

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, e.g. in the chemical or food industries. Such applications may need to be supported with special tests (→ also FN 940082) using appropriate media.

Accessories

Swivel flange SNC

Material:
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] | | |
| 100 | 25 | 75 | 110 $+0.3/-0.8$ | 20 | 41 | 27 | 20 | 89 | 270.7 | 1 | 895 | 174388 | SNC-100 |
| 125 | 37 | 97 | 131 -0.8 | 30 | 50 | 30 | 25 | 110 | 334.7 | 1 | 1740 | 174389 | SNC-125 |

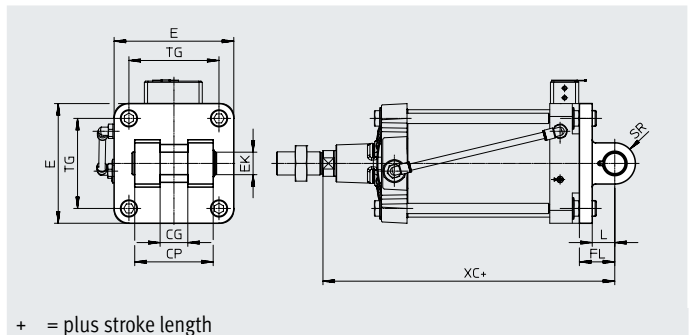
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor applications, as well as protection during transport and storage. Also applies to parts behind covers, in non-visible internal areas, or parts that are covered in the application (e.g. drive trunnions).

2) Suitable for ATEX (areas)

Swivel flange SNG

Material:
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 | d12 | max. | F7/h9 | ± 0.2 | min. | max. | ± 0.3 | | | [g] | | |
| 160 | 43 | 122 | 186 | 35 | 55 | 35 | 32 | 140 | 353.6 | 2 | 3577 | 152597 | SNG-160 |
| 200 | | | 230 | | 60 | | | 175 | 380 | 2 | 5160 | 152598 | SNG-200 |

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

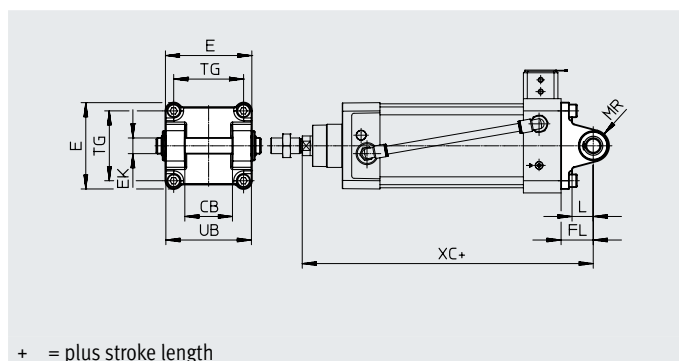
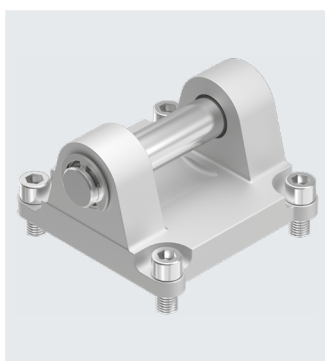
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with the normal surrounding industrial environment.

2) Suitable for ATEX (areas)

Accessories

Swivel flange SNCB/SNCB-...-R3

Material:
 SNCB: Die-cast aluminium
 SNCB-...-R3: Die-cast aluminium with protective coating, high corrosion protection
 RoHS-compliant



+ = plus stroke length

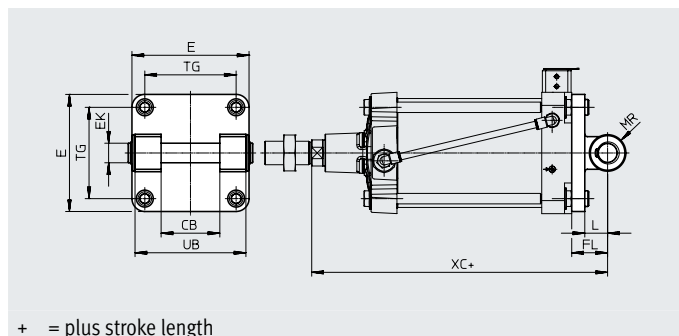
| Dimensions | | | | | | | | | | |
|-------------------|-----|--------------|---------------------|-----------|----|------|-----|-----|-------|--|
| For \varnothing | CB | E | EK \varnothing | FL | L | MR | TG | UB | XC | |
| [mm] | H14 | | H9/e8 | ± 0.2 | | -0.5 | | | | |
| 100 | 60 | 110+0.3/-0.8 | 20 | 41 | 27 | 20 | 89 | 110 | 270.7 | |
| 125 | 70 | 131-0.8 | 25 | 50 | 30 | 25 | 110 | 130 | 314.7 | |

| Ordering data | | | | | | | | | | |
|-------------------|-------------------|------------|----------|----------|--|------------|----------|-------------|--|--|
| For \varnothing | Basic version | | | | Variant R3 – High corrosion protection | | | | | |
| | CRC ¹⁾ | Weight [g] | Part no. | Type | CRC ¹⁾ | Weight [g] | Part no. | Type | | |
| [mm] | | | | | | | | | | |
| 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. Dry indoor applications, as well as protection during transport and storage. Also applies to parts behind covers, in non-visible internal areas, or parts that 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 surface requirements that are in direct contact with the normal surrounding industrial environment.

Swivel flange SNGB For clevis foot LN/LSN

Material:
 Die-cast aluminium



+ = plus stroke length

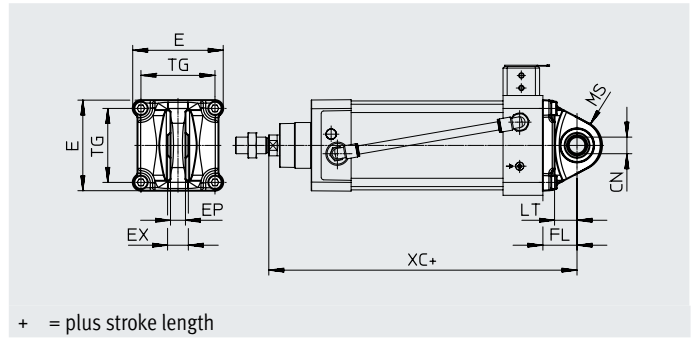
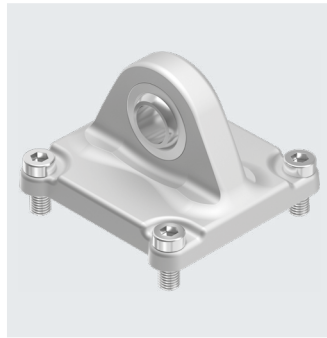
| Dimensions and ordering data | | | | | | | | | | | | | | |
|------------------------------|-----|-------|---------------------|-----------|----|----|-----------|-----|-------|-------------------|------------|----------|------------|--|
| For \varnothing | CB | E | EK \varnothing | FL | L | MR | TG | UB | XC | CRC ¹⁾ | Weight [g] | Part no. | Type | |
| [mm] | H14 | | | ± 0.2 | | | ± 0.2 | h14 | | | | | | |
| 160 | 90 | 183.5 | 30 H9 | 55 | 37 | 30 | 140 | 170 | 353.6 | 2 | 3445 | 34547 | SNGB-160 | |
| 200 | | 220 | | 60 | 40 | 25 | 175 | | 380 | 2 | 10020 | 562455 | SNGB-200-B | |
| 250 | 110 | 268 | 40 E10 | 70 | 47 | 40 | 220 | 200 | 426 | 1 | 16141 | 157512 | SNGB-250 | |
| 320 | 120 | 338 | 45 H9 | 80 | 52 | 45 | 270 | 220 | 481.2 | 1 | 26636 | 157513 | SNGB-320 | |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. Dry indoor applications, as well as protection during transport and storage. Also applies to parts behind covers, in non-visible internal areas, or parts that 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 can occur. External visible parts with primarily decorative surface requirements that are in direct contact with the normal surrounding industrial environment.

Accessories

Swivel flange SNCS

Material:
Wrought aluminium alloy
RoHS-compliant



Dimensions and ordering data

| For \varnothing [mm] | CN \varnothing | E +1/-0.7 | EP ± 0.2 | EX | FL | LT | MS | TG | XC | CRC ¹⁾ | Weight [g] | Part no. | Type |
|---------------------------|---------------------|--------------|-----------------|----|----|----|----|-----|-------|-------------------|---------------|---------------|-----------------|
| 100 | 20 | 109 | 18 | 25 | 41 | 27 | 30 | 89 | 270.7 | 2 | 683 | 174402 | SNCS-100 |
| 125 | 30 | 132 | 25 | 37 | 50 | 30 | 39 | 110 | 314.7 | 2 | 1369 | 174403 | SNCS-125 |

1)

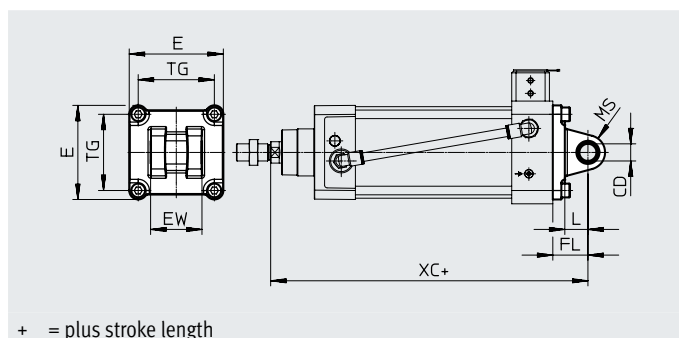
Corrosion resistance class CRC 2 to Festo standard FN 940070

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

Accessories

Swivel flange SNCL

Material:
Die-cast aluminium
RoHS-compliant



+ = plus stroke length

Dimensions and ordering data

| For \varnothing [mm] | CD \varnothing H9 | E | EW | FL | L | MS | TG | XC | CRC ¹⁾ | Weight [g] | Part no. | Type |
|---------------------------|---------------------------|--------------|-----------|------|----|----|----|-------|-------------------|---------------|----------|----------|
| 100 | 20 | 110+0.3/-0.8 | -0.2/-0.6 | +0.2 | 27 | 20 | 72 | 270.7 | 1 | 606 | 174409 | SNCL-100 |
| 125 | 25 | 131-0.8 | 70 | 50 | 30 | 25 | 89 | 314.7 | 1 | 1135 | 174410 | SNCL-125 |

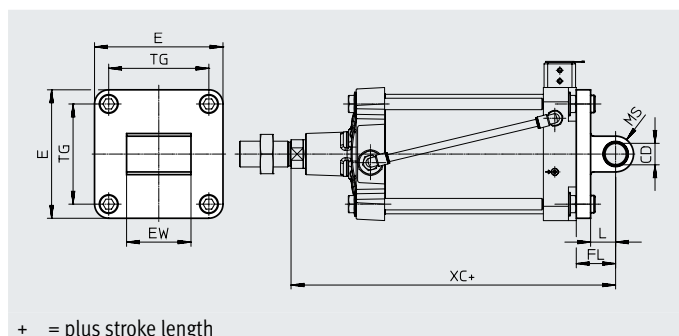
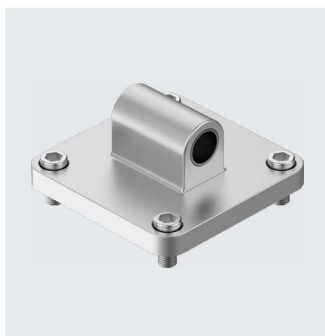
1)

Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor applications, as well as protection during transport and storage. Also applies to parts behind covers, in non-visible internal areas, or parts that are covered in the application (e.g. drive trunnions).

Swivel flange SNGL

Material:
Die-cast aluminium



+ = plus stroke length

Dimensions and ordering data

| For \varnothing [mm] | CD \varnothing H9 | E | EW | FL | L | MS | TG | XC | CRC ¹⁾ | Weight [g] | Part no. | Type |
|---------------------------|---------------------------|-------|----|----|----|----|-----|-------|-------------------|---------------|----------|----------|
| 160 | 30 | 179.5 | 90 | 55 | 35 | 25 | 140 | 353.6 | 2 | 2358 | 151534 | SNGL-160 |
| 200 | | 219.5 | | 60 | | | 175 | | | | | |

1)

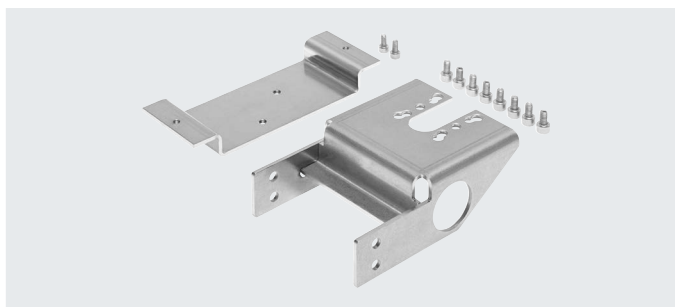
Corrosion resistance class CRC 2 to Festo standard FN 940070

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

Accessories

Adapter kit DADG-AK-F6-A2

For directly mounting a positioner on the linear actuator DFPI-ND2P-E-NB3P



General technical data

| | | |
|--|------|-------------|
| Ambient temperature ¹⁾ | [°C] | -20 ... +80 |
| Corrosion resistance class CRC ²⁾ | | 3 |

1) Note operating range of proximity switches and cylinder

2)

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 surface requirements that are in direct contact with the normal surrounding industrial environment.

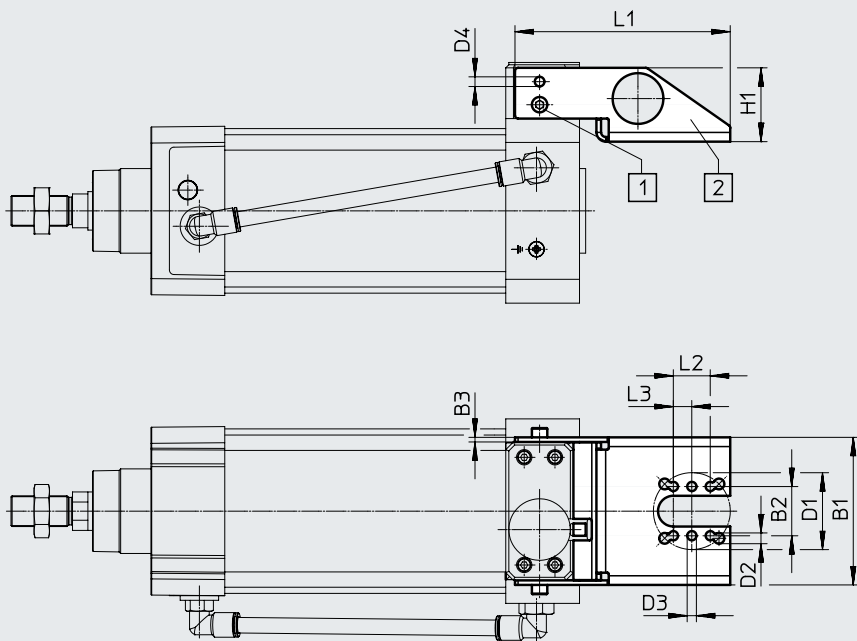
Materials

| | |
|-------------------|--|
| Mounting bracket | High-alloy stainless steel |
| Screws | High-alloy stainless steel |
| Note on materials | Contains paint-wetting impairment substances |
| | RoHS-compliant |

Dimensions

Download CAD data → www.festo.com

Mounting bracket for mounting a positioner with interface to VDI/VDE 3845 sheet 1:2010-09



- [1] Socket head screw DIN 912-M6x10-A2-70
- [2] The adapter can also be rotated 180° during mounting

Dimensions

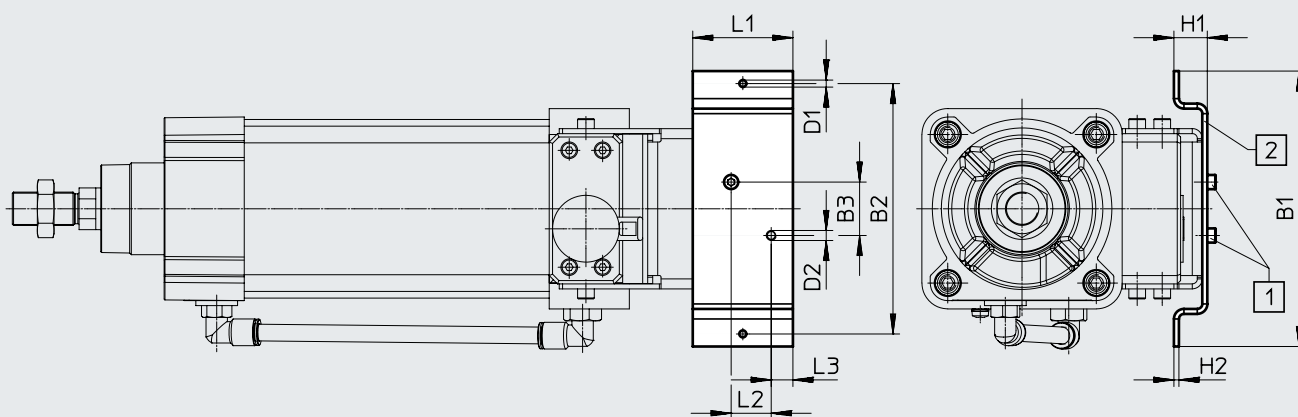
| Type | B1 | B2 | B3 | D1 ∅ | D2 ∅ | D3 ∅ | D4 ∅ | H1 | L1 | L2 | L3 |
|--------|----|----|----|---------|---------|---------|---------|----|-----|----|----|
| DADG-1 | 96 | 32 | 3 | 50 | 7 | 6 | 6.3 | 48 | 140 | 24 | 12 |

Accessories

Dimensions

Download CAD data → www.festo.com

Mounting bracket for mounting a positioner with hole spacing of 150 mm



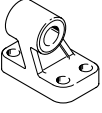
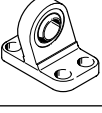
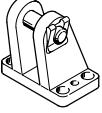
- [1] Socket head screw DIN 912-M5x10-A2-70
- [2] The adapter can also be rotated 180° during mounting

| Dimensions | | | | | | | | | | |
|------------|-----|-----|----|---------|---------|----|----|----|----|----|
| Type | B1 | B2 | B3 | D1 ∅ | D2 ∅ | H1 | H2 | L1 | L2 | L3 |
| DADG-2 | 165 | 150 | 32 | M5 | M6 | 20 | 3 | 60 | 24 | 13 |

| Ordering data – Adapter kit | | | | Datasheets → Internet: smbs | |
|-----------------------------|----------------|--|----------------|-----------------------------|--|
| | For ∅ | Description | Part no. | Type | |
| | 100 ... 320 mm | For directly mounting an external positioner on the actuator | 3179433 | DADG-AK-F6-A2 | |

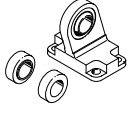

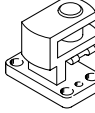
Accessories

Ordering data – Mounting components


| Designation | For \varnothing | Part no. | Type |
|--|-------------------|----------|----------|
| Clevis foot LN/LNG | | | |
|  | 100 | 33895 | LNG-100 |
| | 125 | 33896 | LNG-125 |
| | 160 | 9037 | LN-160 |
| | 200 | 33898 | LNG-200 |
| | 250 | 9039 | LN-250 |
| | 320 | 9040 | LN-320 |
| Clevis foot LSNG | | | |
|  | 100 | 31745 | LSNG-100 |
| | 125 | 31746 | LSNG-125 |
| | 160 | 152599 | LSNG-160 |
| | 200 | 152600 | LSNG-200 |
| Clevis foot LBG¹⁾ | | | |
|  | 100 | 31766 | LBG-100 |
| | 125 | 31767 | LBG-125 |

1) Suitable for ATEX

Datasheets → Internet: clevis foot

| Designation | For \varnothing | Part no. | Type |
|---|-------------------|----------|-----------|
| Clevis foot LSN | | | |
|  | 100 | 5566 | LSN-100 |
| | 125 | 6987 | LSN-125 |
| | 160 | 6988 | LSN-160 |
| | 200 | 6989 | LSN-200 |
| | 250 | 6990 | LSN-250 |
| | 320 | 6991 | LSN-320 |
| Clevis foot LSNSG | | | |
|  | 100 | 31752 | LSNSG-100 |
| | 125 | 31753 | LSNSG-125 |
| Right-angle clevis foot LQG¹⁾ | | | |
|  | 100 | 31773 | LQG-100 |
| | 125 | 31774 | LQG-125 |


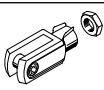
Ordering data – Mounting components, corrosion-resistant

| Designation | For \varnothing | Part no. | Type |
|--|-------------------|----------|-----------|
| Clevis foot CRLNG | | | |
|  | 100 | 161845 | CRLNG-100 |
| | 125 | 176951 | CRLNG-125 |

Datasheets → Internet: crlng

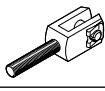
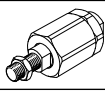
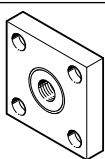
Accessories

Ordering data – Piston rod attachments

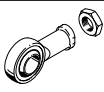
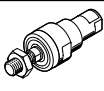
| Designation | For ø | Part no. | Type |
|---|----------|----------|-------------|
| Rod eye SGS | | | |
|  | 100 | 9264 | SGS-M20x1.5 |
| | 125 | 10774 | SGS-M27x2 |
| | 160, 200 | 10775 | SGS-M36x2 |
| | 250 | 10776 | SGS-M42x2 |
| | 320 | 10777 | SGS-M48x2 |
| Rod clevis SG¹⁾ | | | |
|  | 100 | 6147 | SG-M20x1.5 |
| | 125 | 14987 | SG-M27x2-B |
| | 160, 200 | 9581 | SG-M36x2 |
| | 250 | 9582 | SG-M42x2 |
| | 320 | 9583 | SG-M48x2 |

1) Suitable for ATEX

Datasheets → Internet: piston rod attachment

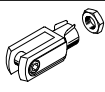
| Designation | For ø | Part no. | Type |
|---|----------|----------|-------------|
| Rod clevis SGA¹⁾ | | | |
|  | 100 | 10769 | SGA-M20x1.5 |
| | 125 | 10770 | SGA-M27x2 |
| | 160, 200 | 10771 | SGA-M36x2 |
| Self-aligning rod coupler FK¹⁾ | | | |
|  | 100 | 6143 | FK-M20x1.5 |
| | 125 | 10485 | FK-M27x2 |
| | 160, 200 | 10746 | FK-M36x2 |
| Coupling piece KSG¹⁾ | | | |
|  | 100 | 32966 | KSG-M20x1.5 |
| | 125 | 32967 | KSG-M27x2 |

Ordering data – Piston rod attachments, corrosion-resistant

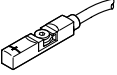
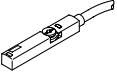

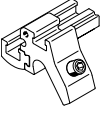

| Designation | For ø | Part no. | Type |
|---|-------|----------|---------------|
| Rod eye CRSGS | | | |
|  | 100 | 195585 | CRSGS-M20x1.5 |
| | 125 | 195586 | CRSGS-M27x2 |
| Self-aligning rod coupler CRFK | | | |
|  | 100 | 2545677 | CRFK-M20x1.5 |

1) Suitable for ATEX



Datasheets → Internet: piston rod attachment

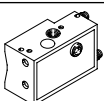
| Designation | For ø | Part no. | Type |
|--|-------|----------|--------------|
| Rod clevis CRSG¹⁾ | | | |
|  | 100 | 13572 | CRSG-M20x1.5 |
| | 125 | 185361 | CRSG-M27x2 |

Accessories

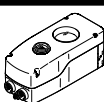
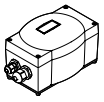
| Ordering data – Proximity switch for T-slot, corrosion-resistant | | | | | | Datasheets → Internet: crsmt |
|--|------------------|--|------------------|----------|------------------------------|-----------------------------------|
| | Switching output | Electrical connection | Cable length [m] | Part no. | Type | |
| N/O | | | | | | |
|  | PNP | Cable, 3-core | 5 | 574380 | CRSMT-8M-PS-24V-K-5,0-OE-EX2 | |
| Ordering data – Proximity switch for T-slot, NAMUR | | | | | | |
| | | | | | | Datasheets → Internet: sdbt |
| | Switching output | Electrical connection | Cable length [m] | Part no. | Type | |
| N/O | | | | | | |
|  | NAMUR | Cable, 2-core | 5 | 579071 | SDBT-MS-20NL-ZN-E-5-LE-EX6 | |
| | | | 10 | 579072 | SDBT-MS-20NL-ZN-E-10-LE-EX6 | |
| Ordering data – Slot cover for T-slot | | | | | | |
| | | | | | | Datasheets → Internet: abp |
| | Mounting | Length [m] | | Part no. | Type | |
|  | Insertable | 2x 0.5 | | 151680 | ABP-5-S | |
| Ordering data – Mounting kits for proximity switches SMT/CRSMT/SDBT | | | | | | |
| | | | | | | Datasheets → Internet: smbz, dasp |
| | For ø | Materials | | Part no. | Type | |
|  | 100 | Rail: Anodised wrought aluminium alloy Screws: High-alloy stainless steel | | 537806 | SMBZ-8-3 2/100 | |
|  | 125 | | | 1451483 | DASP-M4-125-A | |
| | 160, 200 | | | 1553813 | DASP-M4-160-A | |
| | 250 | | | 1456781 | DASP-M4-250-A | |
| | 320 | | | 3015256 | DASP-M4-320-A | |

Accessories

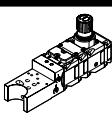
| Ordering data – Connecting cables | | | | | Datasheets → Internet: nebu |
|---|-------------------------------|------------------------------|------------------|----------|-----------------------------|
| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part no. | Type |
|  | Straight socket, M8x1, 3-pin | Cable, open end, 3-core | 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-core | 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-core | 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-core | 2.5 | 541367 | NEBU-M12W5-K-2.5-LE3 |
| | | | 5 | 541370 | NEBU-M12W5-K-5-LE3 |

| Ordering data – Proximity switch, rectangular, pneumatic | | | | | Datasheets → Internet: smpo |
|---|------------------|-------------------------------------|----------|------------|-----------------------------|
| | Mounting | Pneumatic connection | Part no. | Type | |
| 3/2-way valve, normally closed | | | | | |
|  | With accessories | Barbed fitting for tubing I.D. 3 mm | 31008 | SMPO-1-H-B | |

| Ordering data – Mounting kit for proximity switch SMPO-1 | | | | | Datasheets → Internet: smbs |
|--|---------------|---|----------|--------|-----------------------------|
| | For ø | Mounting | Part no. | Type | |
|  | 32 ... 100 mm | On the cylinder barrel using clamping strap | 151226 | SMBS-2 | |

| Ordering data – Positioner | | | | | Datasheets → Internet: cmsh, cmsx |
|---|--|---|-----------|--------------------------|-----------------------------------|
| | Description | Function | Part no. | Type | |
|  | <ul style="list-style-type: none"> Product versions for fail-safe or fail-in-place safety function Product versions for single- or double-acting actuators | <ul style="list-style-type: none"> CMSH-SE-VDE1-D-... for attaching a positioner in accordance with VDE/VDI 3845-1 CMSH-SE-VDE2-D-... for directly attaching a positioner in accordance with VDE/VDI 3847-2 | 8148076 | CMSH- | |
|  | Can be set to opening/closing in the event of a system failure ¹⁾ | Double-acting | ★ 3929539 | CMSX-P-SE-C-U-F1-D-130-A | |
| | Holds position in the event of a system failure ¹⁾ | | 3929540 | CMSX-P-SE-C-U-F1-D-130-C | |

1) Failure of the operating voltage supply or setpoint specification

| Ordering data – Valve terminal | | | | | Datasheets → Internet: vtop |
|---|---|----------|-------|--|-----------------------------|
| | Mounting | Part no. | Type | | |
|  | For additional pneumatic functions such as compressed air control, volume flow boosting, reaching a defined end position in the event of pressure failure, safe venting and reversing the effective direction | 8141655 | VTOP- | | |