

Compact cylinder DPDM, multi-mount

FESTO



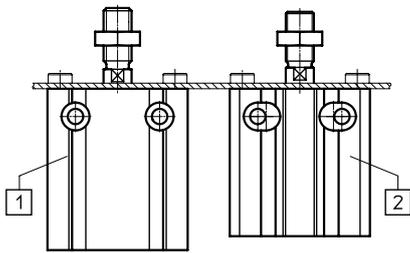
Key features

At a glance

- Double- and single-acting versions
- With and without protection against rotation
- Easy to interchange compared to compact cylinder DMM
- Simple to mount thanks to a wide range of mounting interfaces
- Optional: heat-resistant up to 120 °C

Comparison of compact cylinder DMM and compact cylinder DPDM

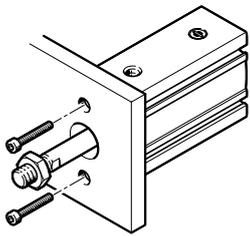
- All mounting interfaces of compact cylinder DPDM are compatible with those of compact cylinder DMM
- Compared to DMM, however, DPDM is noticeably shorter, giving a lower product weight for the same functionality



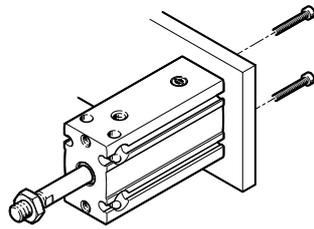
- [1] Compact cylinders DMM
[2] Compact cylinders DPDM

Mounting options

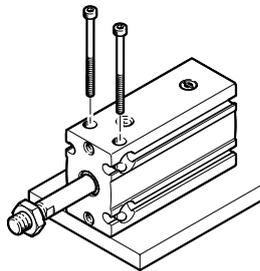
Mounting at the front



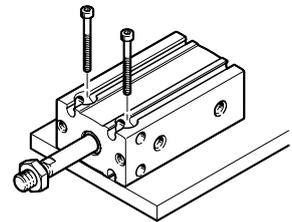
Mounting at the rear



Vertical mounting



Horizontal mounting



For manufacturing lithium-ion batteries

DPDM-...-F1A

Recommended for production systems for manufacturing lithium-ion batteries. Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.

Accessories

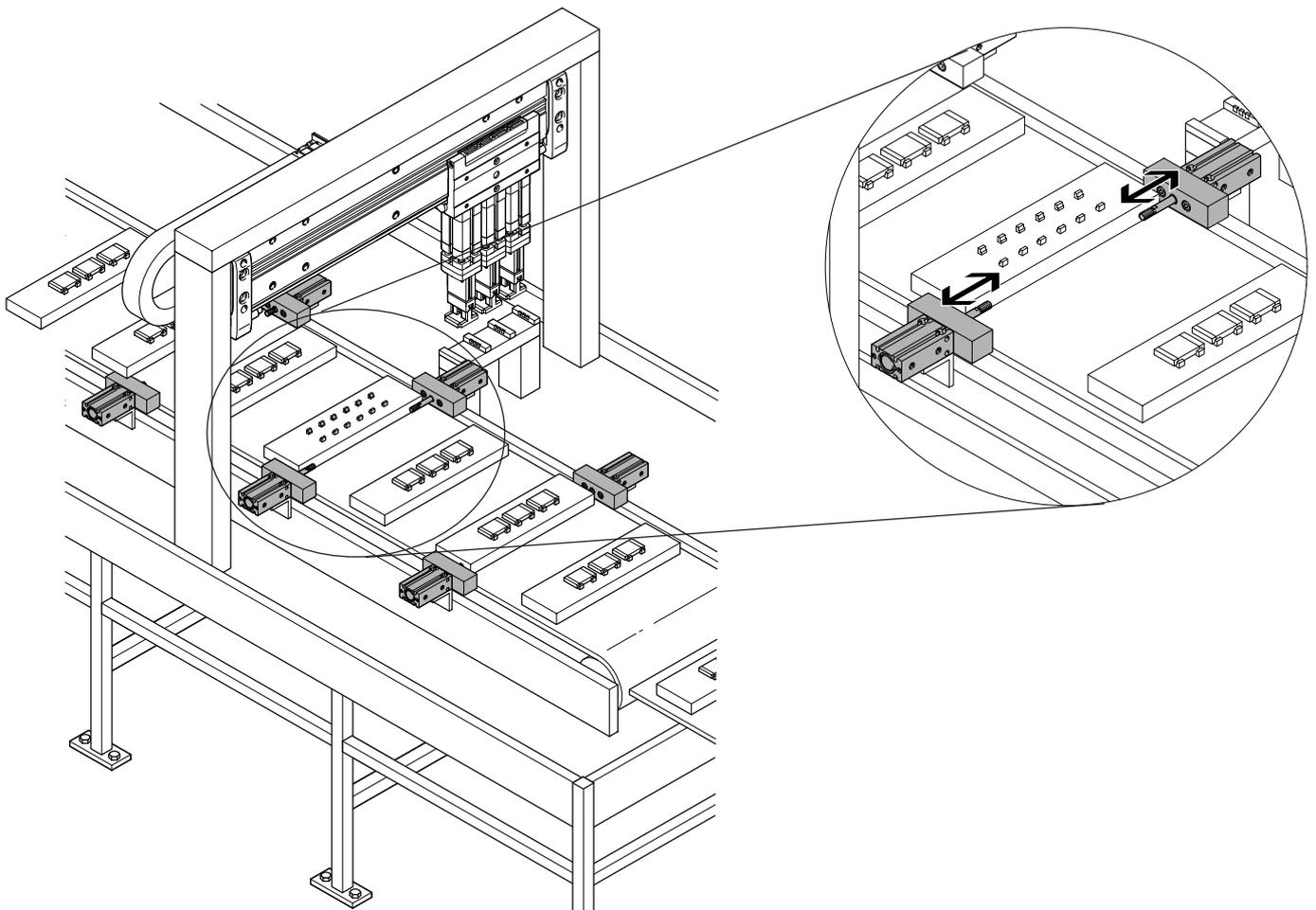
Please contact your Festo representative for information on which accessories are suitable for manufacturing lithium-ion batteries.

Key features

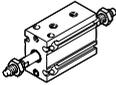
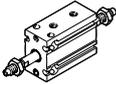
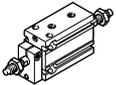
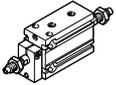
| Variants from the modular product system | | |
|---|--|--|
| Symbol | Key features | Description |
|  | T Through piston rod | The piston rod can be used for attachment at both ends of the cylinder |
|  | H Through, hollow piston rod | The piston rod can be used for attachment at both ends of the cylinder. The piston rod is hollow inside. This means it can be used to carry vacuum or compressed air |
|  | T1 Heat-resistant seals | Temperature range 0 ... +120 °C |
| | F1A Recommended for production plants for manufacturing Li-ion batteries | Cylinders free of copper, zinc and nickel ($\leq 1\%$) |

Application example

Stopping small parts



Product range overview

| Function | Version | Type | Piston \varnothing [mm] | Stroke [mm] | Temperature range [T1] 0 ... +120 °C | Battery manufacturing [F1A] | → Page/ Internet |
|---|---|--|-------------------------------|-------------------------------|--|--------------------------------|---------------------|
| Double-acting | Basic version | | | | | | |
| |  | DPDM Piston rod at one end | 6, 10 | 5, 10, 15, 20, 25, 30 | ■ From \varnothing 10 | ■ Not with T1 | 5 |
| | | | 16, 20, 25, 32 | 5, 10, 15, 20, 25, 30, 40, 50 | | | |
| |  | DPDM-...-T Through piston rod | 6, 10 | 5, 10, 15, 20, 25, 30 | - | ■ Not with T1 | |
| | | | 16, 20, 25, 32 | 5, 10, 15, 20, 25, 30, 40, 50 | | | |
| |  | DPDM-...-H Through, hollow piston rod | 16, 20, 25, 32 | 5, 10, 15, 20, 25, 30, 40, 50 | - | ■ Not with T1 | |
| | | | | | | | |
| | With protection against rotation | | | | | | |
| |  | DPDM-Q Piston rod at one end | 6, 10 | 5, 10, 15, 20, 25, 30 | ■ From \varnothing 10 | ■ Not with T1 | 5 |
| | | | 16, 20, 25, 32 | 5, 10, 15, 20, 25, 30, 40, 50 | | | |
| |  | DPDM-Q-...-T Through piston rod | 6, 10 | 5, 10, 15, 20, 25, 30 | - | ■ Not with T1 | |
| | | | 16, 20, 25, 32 | 5, 10, 15, 20, 25, 30, 40, 50 | | | |
|  | DPDM-Q-...-H Through, hollow piston rod | 16, 20, 25, 32 | 5, 10, 15, 20, 25, 30, 40, 50 | - | ■ Not with T1 | | |
| | | | | | | | |
| Single-acting | Basic version | | | | | | |
| |  | DPDM-...-S Piston rod at one end, pushing | 6, 10 | 5, 10, 15 | - | - | 5 |
| | | | 16, 20, 25, 32 | 5, 10, 15 | | | |
| |  | DPDM-...-P Piston rod at one end, pulling | 6, 10 | 5, 10, 15 | - | - | |
| | | | 16, 20, 25, 32 | 5, 10, 15 | | | |
| | With protection against rotation | | | | | | |
| |  | DPDM-Q-...-S Piston rod at one end, pushing | 6, 10 | 5, 10, 15 | - | - | 5 |
| | | | 16, 20, 25, 32 | 5, 10, 15 | | | |
|  | DPDM-Q-...-P Piston rod at one end, pulling | 6, 10 | 5, 10, 15 | - | - | | |
| | | 16, 20, 25, 32 | 5, 10, 15 | | | | |

Type codes

| 001 | Series |
|------|----------------------|
| DPDM | Cylinder, multimount |

| 002 | Protection against rotation |
|-----|----------------------------------|
| | None |
| Q | With protection against rotation |

| 003 | Piston diameter [mm] |
|-----|----------------------|
| 6 | 6 |
| 10 | 10 |
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |
| 32 | 32 |

| 004 | Stroke [mm] |
|-----|-------------|
| 5 | 5 |
| 10 | 10 |
| 15 | 15 |
| 20 | 20 |
| 25 | 25 |
| 30 | 30 |
| 40 | 40 |
| 50 | 50 |

| 005 | Function |
|-----|------------------------|
| | Double-acting |
| P | Single-acting, pulling |
| S | Single-acting, pushing |

| 006 | Piston rod type |
|-----|----------------------------|
| | At one end |
| H | Through, hollow piston rod |
| T | Through piston rod |

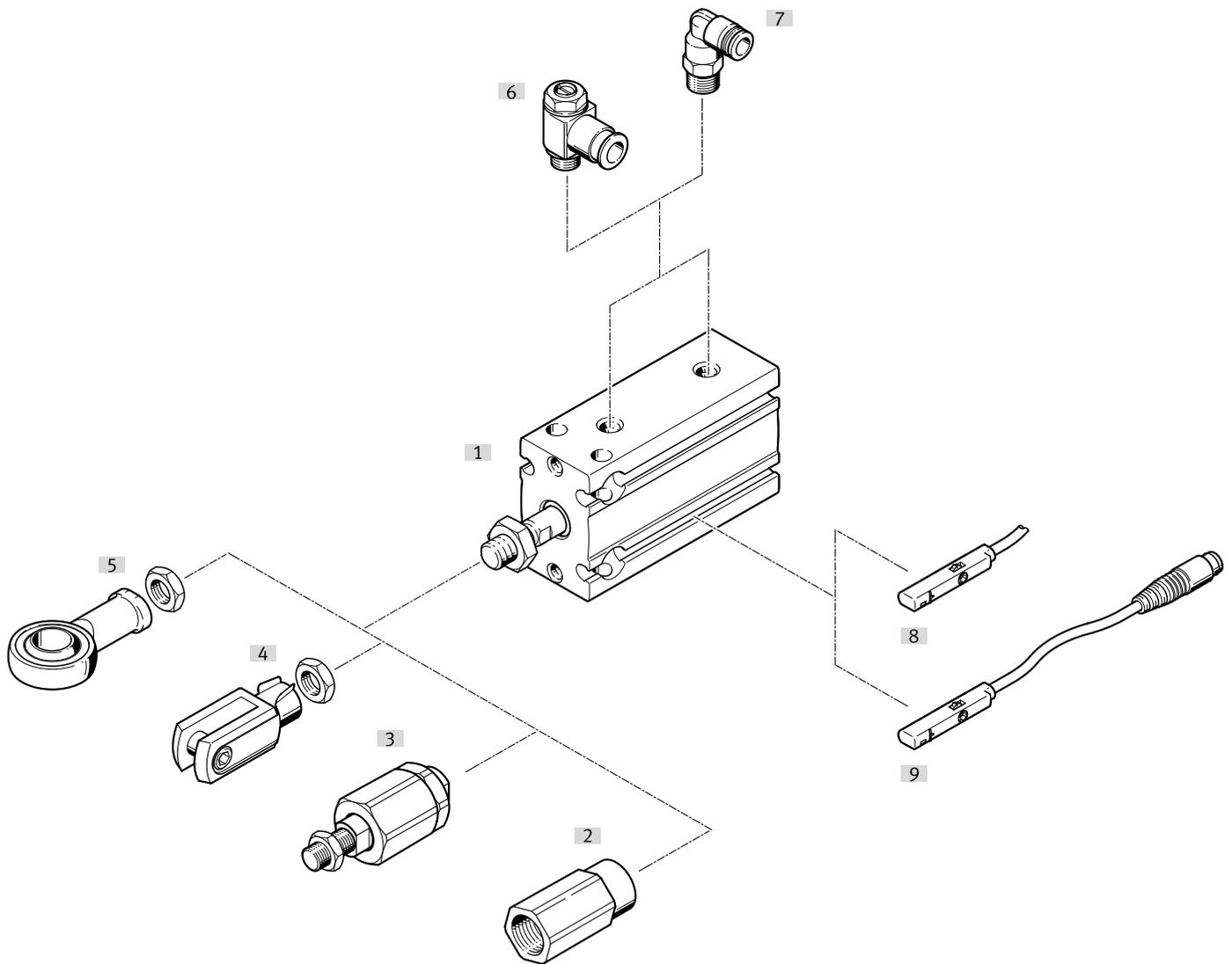
| 007 | Cushioning |
|-----|---|
| P | Elastic cushioning rings/plates on both sides |

| 008 | Position sensing |
|-----|----------------------|
| A | For proximity sensor |

| 009 | Temperature range |
|-----|---------------------------------|
| | Standard |
| T1 | Heat-resistant seals max. 120°C |

| 010 | Special material properties |
|-----|--|
| | None |
| F1A | Recommended for production plants for manufacturing lithium-ion batteries, F1A |

Peripherals overview



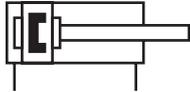
| Accessories | | Description | → Page/Internet |
|-------------|--------------------------------------|--|-----------------|
| [1] | Compact cylinder DPDM | Double- and single-acting versions | 7 |
| [2] | Adapter AD | For suction cup | 16 |
| [3] | Self-aligning rod coupler FK | To compensate for radial and angular deviations | 16 |
| [4] | Rod clevis SG | Permits a swivelling movement of the cylinder in one plane | 16 |
| [5] | Rod eye SGS | With spherical bearing | 16 |
| [6] | One-way flow control valve GRLA/VFOH | For regulating speed | 10 |
| [7] | Push-in fitting QS | For connecting tubing with standard O.D. | 16 |
| [8] [9] | Proximity switch SME/SMT-8, SMT-10 | Can be integrated in the cylinder profile barrel | 17 |

Datasheet

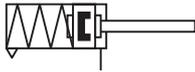
Function
DPDM

-  - Diameter
6 ... 32 mm

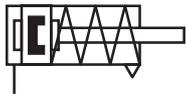
-  - Stroke length
5 ... 50 mm



DPDM...-P



DPDM...-S



| General technical data | | | | | | |
|--------------------------|--|----|-------------------------------|----|----------|----------|
| Piston \varnothing | 6 | 10 | 16 | 20 | 25 | 32 |
| Design | Piston | | | | | |
| | Piston rod | | | | | |
| | Profile tube | | | | | |
| Operating mode | Double- and single-acting | | | | | |
| Pneumatic connection | M5 | M5 | M5 | M5 | M5 | G1/8 |
| Piston rod thread | M3 | M4 | M6 | M8 | M10x1.25 | M10x1.25 |
| Stroke | DPDM... DPDM...-S/-P | | | | | |
| | 5, 10, 15, 20, 25, 30 | | 5, 10, 15, 20, 25, 30, 40, 50 | | | |
| | 5, 10, 15 | | | | | |
| Cushioning ¹⁾ | Elastic cushioning rings/plates at both ends | | | | | |
| Position sensing | Via proximity switch | | | | | |
| Type of mounting | Via through-hole With female thread | | | | | |
| Mounting position | Any | | | | | |

1) With piston diameter 6 in combination with the function "Single-acting, pushing", there is only cushioning at the bearing cap.

| Operating and environmental conditions | | | | | | |
|--|--|--------------|--------------|---|----|--------------|
| Piston \varnothing | 6 | 10 | 16 | 20 | 25 | 32 |
| Operating pressure | | | | | | |
| DPDM... | [MPa] | 0.18 ... 0.8 | 0.15 ... 0.8 | 0.1 ... 0.8 | | |
| | [bar] | 1.8 ... 8 | 1.5 ... 8 | 1 ... 8 | | |
| DPDM-Q... | [MPa] | 0.2 ... 0.8 | 0.15 ... 0.8 | 0.1 ... 0.8 | | |
| | [bar] | 2 ... 8 | 1.5 ... 8 | 1 ... 8 | | |
| DPDM...-S/-P | [MPa] | 0.25 ... 0.8 | 0.2 ... 0.8 | 0.15 ... 0.8 | | 0.15 ... 0.8 |
| | [bar] | 2.5 ... 8 | 2 ... 8 | 1.5 ... 8 | | 1.5 ... 8 |
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] | | | | | |
| Note on the operating/pilot medium | Lubricated operation possible (in which case lubricated operation will always be required) | | | | | |
| Ambient temperature ¹⁾ | | | | | | |
| DPDM... | [°C] | -10 ... +80 | | | | |
| DPDM...-T1 | [°C] | - | 0 ... +120 | | | |
| Corrosion resistance class CRC ²⁾ | | | | | | |
| DPDM... | 1 - Low corrosion stress ³⁾ | | | | | |
| | - | | | 2 - Moderate corrosion stress ³⁾ | | |
| DPDM...-F1A | 0 - no corrosion stress | | | | | |

1) Note operating range of proximity switches

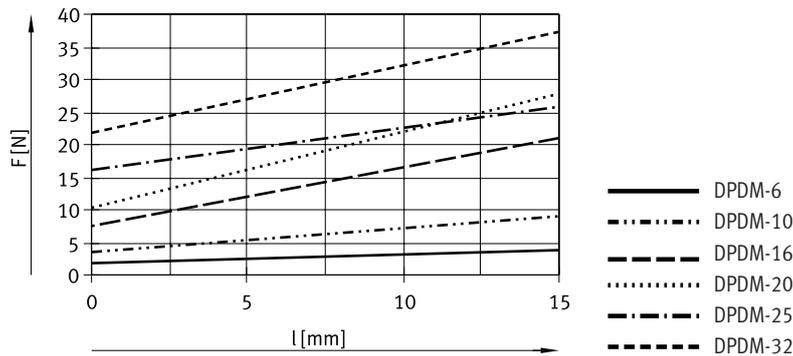
2) More information www.festo.com/x/topic/crc

3) CRC1 or CRC2, depending on the respective configuration

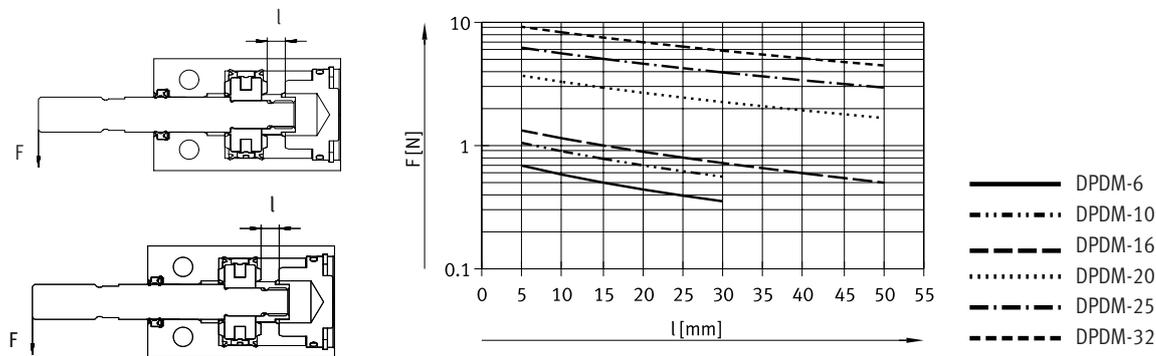
Datasheet

| Forces [N] and impact energy [J] | | | | | | |
|--|-------|-------|------|-----|-----|-----|
| Piston \varnothing | 6 | 10 | 16 | 20 | 25 | 32 |
| Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing | | | | | | |
| DPDM-... | 17 | 47 | 121 | 188 | 295 | 483 |
| DPDM-...-S | 13 | 38 | 100 | 160 | 269 | 445 |
| DPDM-...-T/-H | 13 | 40 | 104 | 158 | 247 | 415 |
| Theoretical force at 0.6 MPa (6 bar, 87 psi), retracting | | | | | | |
| DPDM-... | 13 | 40 | 104 | 158 | 247 | 415 |
| DPDM-...-P | 9 | 31 | 93 | 130 | 221 | 377 |
| Max. impact energy in the end positions | 0.006 | 0.012 | 0.15 | 0.2 | 0.3 | 0.4 |

Theoretical spring force F as a function of stroke length l



Max. lateral force F as a function of stroke length l

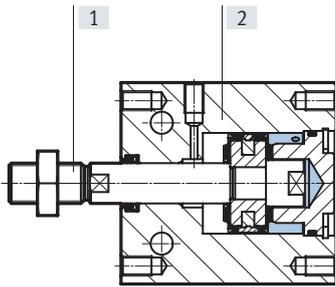


Technical data – Protection against rotation

| Piston \varnothing | 6 | 10 | 16 | 20 | 25 | 32 |
|--|--------|-------|------|------|-------|------|
| Max. torque at the piston rod ¹⁾ [Nm] | 0.0015 | 0.005 | 0.01 | 0.01 | 0.015 | 0.02 |

1) The max. torque must not be exceeded even when attaching mounting components to the piston rod

Datasheet



Materials

Sectional view

Compact cylinder

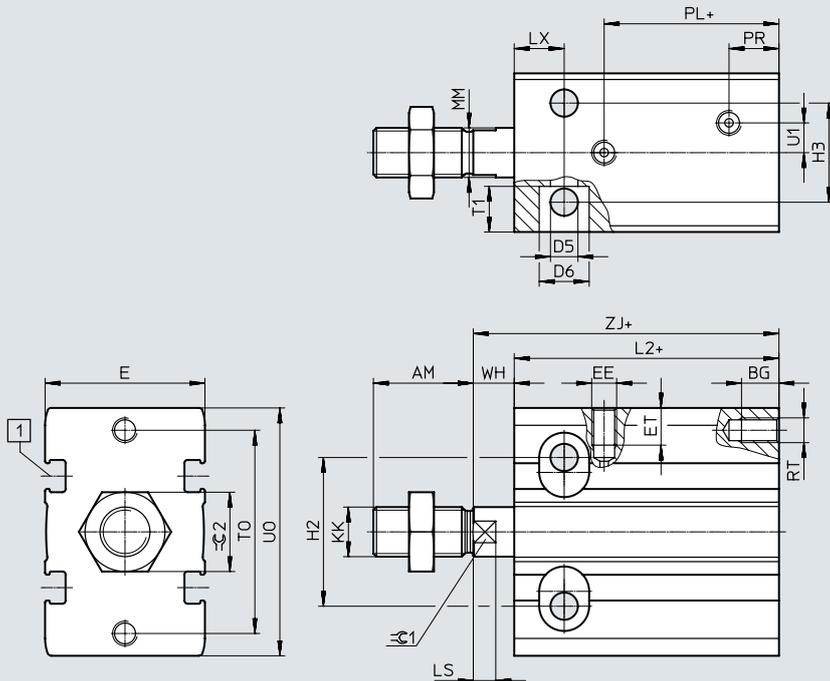
| | | |
|-------------------|------------------------|---|
| [1] | Housing | Wrought aluminium alloy |
| [2] | Piston rod | High-alloy stainless steel |
| Seals | | |
| | DPDM-... | NBR/TPE-U(PU) |
| | DPDM-...-T1 | HNBR/FKM |
| Note on materials | | |
| | Cleanroom class | Class 6 to ISO 14644-1 |
| | LABS (PWIS) conformity | VDMA24364-B2-L |
| | DPDM-...-F1A | Metals with more than 1% by mass of copper, zinc or nickel are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils |

| Weight [g] | | | | | | |
|--|------|------|------|------|------|------|
| Piston ø | 6 | 10 | 16 | 20 | 25 | 32 |
| Double-acting | | | | | | |
| DPDM-...-PA | | | | | | |
| Product weight with 0 mm stroke | 20.7 | 30 | 66 | 128 | 205 | 307 |
| Additional weight per 10 mm stroke | 6.3 | 7.5 | 13 | 22 | 33.5 | 51 |
| Moving mass with 0 mm stroke | 2.8 | 6.3 | 18 | 34.5 | 58 | 85 |
| Moving mass per 10 mm stroke | 0.6 | 1.0 | 2.3 | 4 | 6.5 | 9 |
| DPDM-Q-...-PA – with protection against rotation | | | | | | |
| Product weight with 0 mm stroke | 25.5 | 36.5 | 75 | 140 | 223 | 331 |
| Additional weight per 10 mm stroke | 6.3 | 7.5 | 13.5 | 22.5 | 35 | 52.5 |
| Moving mass with 0 mm stroke | 7.1 | 12.5 | 27 | 46 | 76 | 109 |
| Moving mass per 10 mm stroke | 0.9 | 1.3 | 2.8 | 4.6 | 8 | 10.5 |
| Single-acting | | | | | | |
| DPDM-...-S-PA – pushing | | | | | | |
| Product weight with 0 mm stroke | 21 | 30.5 | 66 | 117 | 192 | 310 |
| Additional weight per 10 mm stroke | 6.3 | 7.5 | 13 | 22 | 33.5 | 51 |
| Moving mass with 0 mm stroke | 3 | 6.8 | 18 | 34.5 | 58 | 85 |
| Moving mass per 10 mm stroke | 0.6 | 1 | 2.3 | 4 | 6.5 | 9 |
| DPDM-Q-...-S-PA – pushing, with protection against rotation | | | | | | |
| Product weight with 0 mm stroke | 25.5 | 37 | 75 | 129 | 210 | 334 |
| Additional weight per 10 mm stroke | 6.3 | 7.5 | 13 | 22 | 35 | 52.5 |
| Moving mass with 0 mm stroke | 7.5 | 13 | 27 | 46 | 76 | 109 |
| Moving mass per 10 mm stroke | 0.9 | 1.3 | 2.8 | 4.6 | 8 | 10.5 |
| DPDM-...-P-PA – pulling | | | | | | |
| Product weight with 0 mm stroke | 21 | 30 | 66 | 128 | 208 | 310 |
| Additional weight per 10 mm stroke | 6.3 | 7.5 | 13 | 22 | 33.5 | 51 |
| Moving mass with 0 mm stroke | 3 | 7 | 18 | 34.5 | 58 | 85 |
| Moving mass per 10 mm stroke | 0.6 | 1 | 2.3 | 4 | 6.5 | 9 |
| DPDM-Q-...-P-PA – pulling, with protection against rotation | | | | | | |
| Product weight with 0 mm stroke | 25.5 | 36.5 | 75 | 140 | 226 | 334 |
| Additional weight per 10 mm stroke | 6.3 | 7.5 | 13 | 22 | 35 | 52.5 |
| Moving mass with 0 mm stroke | 7.5 | 13.5 | 27 | 46 | 76 | 109 |
| Moving mass per 10 mm stroke | 0.9 | 1.3 | 2.8 | 4.6 | 8 | 10.5 |

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Dimensions

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[1] Sensor slot for proximity switch:
 ø 6 ... 20: SMT-10
 ø 25/32: SMT/SME-8

| ø | AM | BG | D5 ø | D6 | E | EE | ET | H2 |
|------|----|-----|---------|-----|------|------|-----|----|
| [mm] | | | | | +0.3 | | | |
| 6 | 7 | 5 | 3.2 | 6 | 13 | M5 | 4 | 10 |
| 10 | 10 | 5 | 3.2 | 6 | 15 | M5 | 4.5 | 13 |
| 16 | 12 | 6 | 4.3 | 7.5 | 20 | M5 | 4.5 | 19 |
| 20 | 16 | 7.5 | 5.5 | 10 | 26 | M5 | 6 | 24 |
| 25 | 20 | 7.5 | 5.5 | 10 | 32 | M5 | 7.5 | 30 |
| 32 | 20 | 9 | 6.6 | 11 | 40 | G1/8 | 8.5 | 40 |

| ø | H3 | KK | L2 | LS | LX | MM ø | PL | PR |
|------|----|----------|----|------|----|---------|------|-----|
| [mm] | | | | -0.1 | | | | |
| 6 | 7 | M3 | 33 | - | 7 | 3 | 17.5 | 9.5 |
| 10 | 9 | M4 | 35 | - | 7 | 4 | 19.5 | 9.5 |
| 16 | 13 | M6 | 40 | 3 | 7 | 6 | 24.1 | 11 |
| 20 | 16 | M8 | 46 | 4 | 9 | 8 | 26.5 | 11 |
| 25 | 20 | M10x1.25 | 48 | 4.5 | 10 | 10 | 30 | 10 |
| 32 | 24 | M10x1.25 | 48 | 4.5 | 11 | 12 | 27 | 11 |

| ø | RT | T1 | T0 | U1 | U0 | WH ¹⁾ | ZJ | ⊕1 h13 | ⊕2 |
|------|----|-----|----|----|----|------------------|----|-----------|-----|
| [mm] | | | | | | | | | |
| 6 | M3 | 5 | 17 | - | 22 | 2 | 35 | - | 5.5 |
| 10 | M3 | 5 | 19 | - | 24 | 2 | 37 | - | 7 |
| 16 | M4 | 6 | 27 | - | 32 | 5 | 45 | 5 | 10 |
| 20 | M5 | 8.2 | 33 | 6 | 40 | 6 | 52 | 7 | 13 |
| 25 | M5 | 9.2 | 41 | 6 | 50 | 7 | 55 | 9 | 17 |
| 32 | M6 | 12 | 52 | 9 | 62 | 8 | 56 | 10 | 17 |

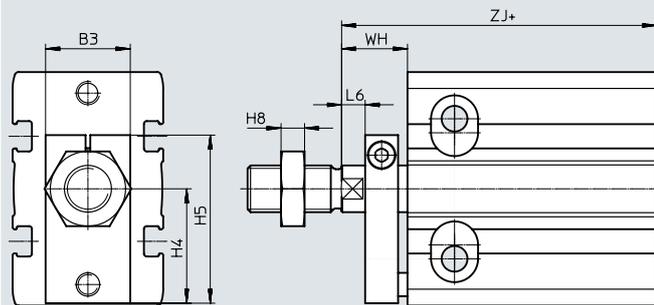
1) WH is measured when the piston rod is in the end position

Datasheet

Dimensions – Variants

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Q – with protection against rotation

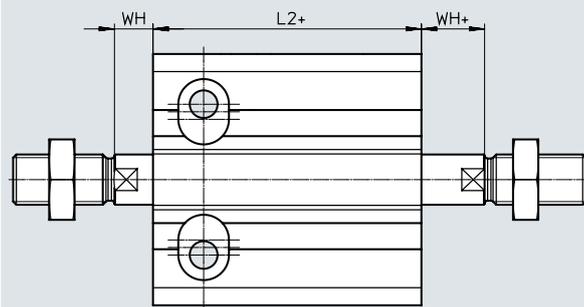


+ = plus stroke length

| ∅ [mm] | B3 | H4 | H5 | H8 | L6 | WH | ZJ |
|--------|----|------|------|-----|----|----|----|
| 6 | 11 | 10.5 | 17.5 | 1.8 | – | 9 | 42 |
| 10 | 14 | 11.5 | 19.5 | 2.2 | – | 9 | 44 |
| 16 | 15 | 15.5 | 24 | 3.2 | 3 | 12 | 52 |
| 20 | 15 | 19.5 | 29 | 4 | 4 | 13 | 59 |
| 25 | 18 | 24.5 | 36 | 5 | 5 | 14 | 62 |
| 32 | 20 | 30.5 | 45 | 5 | 6 | 15 | 63 |

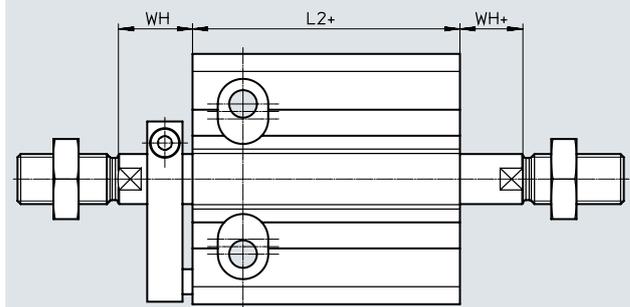
T – Through piston rod

DPDM- ... -T



++ = plus 2x stroke length

DPDM-Q- ... -T



++ = plus 2x stroke length

| ∅ [mm] | L2 | WH | WH+ |
|--------|----|----|-----|
| 6 | 33 | 2 | 2 |
| 10 | 35 | 2 | 2 |
| 16 | 40 | 5 | 5 |
| 20 | 46 | 6 | 6 |
| 25 | 48 | 7 | 7 |
| 32 | 48 | 8 | 8 |

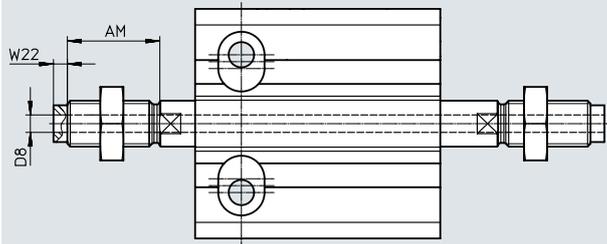
| ∅ [mm] | L2 | WH | WH+ |
|--------|----|----|-----|
| 6 | 33 | 9 | 2 |
| 10 | 35 | 9 | 2 |
| 16 | 40 | 12 | 5 |
| 20 | 46 | 13 | 6 |
| 25 | 48 | 14 | 7 |
| 32 | 48 | 15 | 8 |

Datasheet

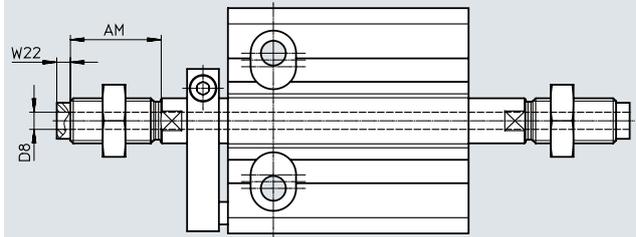
Dimensions – Variants

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H – Through, hollow piston rod
 DPDM- ... -H



DPDM-Q- ... -H



++

= plus 2x stroke length

| ∅ [mm] | AM | D8 ∅ | W22 |
|-----------|----|---------|-----|
| 16 | 12 | 2.3 | 3 |
| 20 | 16 | 3.2 | 2 |
| 25 | 20 | 3.8 | 3 |
| 32 | 20 | 4.5 | 3 |

Datasheet

| Ordering data – Double-acting | | | | | | |
|---|------------------|----------------|------------------------------------|---------------|----------------------------------|-----------------|
| Type | Piston ø [mm] | Stroke [mm] | Without protection against torsion | | With protection against rotation | |
| | | | Part no. | Type | Part no. | Type |
|  | 6 | 5 | 4830900 | DPDM-6-5-PA | 4830961 | DPDM-Q-6-5-PA |
| | | 10 | 4830901 | DPDM-6-10-PA | 4830962 | DPDM-Q-6-10-PA |
| | | 15 | 4830902 | DPDM-6-15-PA | 4830963 | DPDM-Q-6-15-PA |
| | | 20 | 4830903 | DPDM-6-20-PA | 4830964 | DPDM-Q-6-20-PA |
| | | 25 | 4830904 | DPDM-6-25-PA | 4830965 | DPDM-Q-6-25-PA |
| | | 30 | 4830905 | DPDM-6-30-PA | 4830966 | DPDM-Q-6-30-PA |
| | 10 | 5 | 4831868 | DPDM-10-5-PA | 4832286 | DPDM-Q-10-5-PA |
| | | 10 | 4831869 | DPDM-10-10-PA | 4832288 | DPDM-Q-10-10-PA |
| | | 15 | 4831870 | DPDM-10-15-PA | 4832290 | DPDM-Q-10-15-PA |
| | | 20 | 4831872 | DPDM-10-20-PA | 4832292 | DPDM-Q-10-20-PA |
| | | 25 | 4831873 | DPDM-10-25-PA | 4832294 | DPDM-Q-10-25-PA |
| | | 30 | 4831874 | DPDM-10-30-PA | 4832296 | DPDM-Q-10-30-PA |
| | 16 | 5 | 4833185 | DPDM-16-5-PA | 4834260 | DPDM-Q-16-5-PA |
| | | 10 | 4833186 | DPDM-16-10-PA | 4834261 | DPDM-Q-16-10-PA |
| | | 15 | 4833187 | DPDM-16-15-PA | 4834262 | DPDM-Q-16-15-PA |
| | | 20 | 4833188 | DPDM-16-20-PA | 4834263 | DPDM-Q-16-20-PA |
| | | 25 | 4833189 | DPDM-16-25-PA | 4834264 | DPDM-Q-16-25-PA |
| | | 30 | 4833190 | DPDM-16-30-PA | 4834265 | DPDM-Q-16-30-PA |
| | | 40 | 4833191 | DPDM-16-40-PA | 4834266 | DPDM-Q-16-40-PA |
| | | 40 | 4833192 | DPDM-16-50-PA | 4834267 | DPDM-Q-16-50-PA |
| | 20 | 5 | 4840799 | DPDM-20-5-PA | 4840813 | DPDM-Q-20-5-PA |
| | | 10 | 4840800 | DPDM-20-10-PA | 4840814 | DPDM-Q-20-10-PA |
| | | 15 | 4840801 | DPDM-20-15-PA | 4840815 | DPDM-Q-20-15-PA |
| | | 20 | 4840802 | DPDM-20-20-PA | 4840816 | DPDM-Q-20-20-PA |
| | | 25 | 4840803 | DPDM-20-25-PA | 4840817 | DPDM-Q-20-25-PA |
| | | 30 | 4840804 | DPDM-20-30-PA | 4840818 | DPDM-Q-20-30-PA |
| | | 40 | 4840805 | DPDM-20-40-PA | 4840819 | DPDM-Q-20-40-PA |
| | | 50 | 4840806 | DPDM-20-50-PA | 4840820 | DPDM-Q-20-50-PA |
| 25 | 5 | 4829570 | DPDM-25-5-PA | 4840824 | DPDM-Q-25-5-PA | |
| | 10 | 4829571 | DPDM-25-10-PA | 4840825 | DPDM-Q-25-10-PA | |
| | 15 | 4829572 | DPDM-25-15-PA | 4840826 | DPDM-Q-25-15-PA | |
| | 20 | 4829573 | DPDM-25-20-PA | 4840827 | DPDM-Q-25-20-PA | |
| | 25 | 4829574 | DPDM-25-25-PA | 4840828 | DPDM-Q-25-25-PA | |
| | 30 | 4829575 | DPDM-25-30-PA | 4840829 | DPDM-Q-25-30-PA | |
| | 40 | 4829576 | DPDM-25-40-PA | 4840830 | DPDM-Q-25-40-PA | |
| | 50 | 4829577 | DPDM-25-50-PA | 4840831 | DPDM-Q-25-50-PA | |
| 32 | 5 | 4828435 | DPDM-32-5-PA | 4828465 | DPDM-Q-32-5-PA | |
| | 10 | 4828436 | DPDM-32-10-PA | 4828466 | DPDM-Q-32-10-PA | |
| | 15 | 4828437 | DPDM-32-15-PA | 4828467 | DPDM-Q-32-15-PA | |
| | 20 | 4828438 | DPDM-32-20-PA | 4828468 | DPDM-Q-32-20-PA | |
| | 25 | 4828439 | DPDM-32-25-PA | 4828469 | DPDM-Q-32-25-PA | |
| | 30 | 4828440 | DPDM-32-30-PA | 4828470 | DPDM-Q-32-30-PA | |
| | 40 | 4828441 | DPDM-32-40-PA | 4828471 | DPDM-Q-32-40-PA | |
| | 50 | 4828442 | DPDM-32-50-PA | 4828472 | DPDM-Q-32-50-PA | |

Datasheet

Ordering data – Single-acting – Pushing

| Type | Piston ø [mm] | Stroke [mm] | Without protection against torsion | | With protection against rotation | |
|--|------------------|----------------|------------------------------------|-----------------|----------------------------------|-------------------|
| | | | Part no. | Type | Part no. | Type |
|  | 6 | 5 | 4830909 | DPDM-6-5-S-PA | 4830970 | DPDM-Q-6-5-S-PA |
| | | 10 | 4830910 | DPDM-6-10-S-PA | 4830971 | DPDM-Q-6-10-S-PA |
| | | 15 | 4830911 | DPDM-6-15-S-PA | 4830972 | DPDM-Q-6-15-S-PA |
| | 10 | 5 | 4832116 | DPDM-10-5-S-PA | 4833119 | DPDM-Q-10-5-S-PA |
| | | 10 | 4832117 | DPDM-10-10-S-PA | 4833120 | DPDM-Q-10-10-S-PA |
| | | 15 | 4832118 | DPDM-10-15-S-PA | 4833121 | DPDM-Q-10-15-S-PA |
| | 16 | 5 | 4833272 | DPDM-16-5-S-PA | 4834367 | DPDM-Q-16-5-S-PA |
| | | 10 | 4833273 | DPDM-16-10-S-PA | 4834368 | DPDM-Q-16-10-S-PA |
| | | 15 | 4833274 | DPDM-16-15-S-PA | 4834369 | DPDM-Q-16-15-S-PA |
| | 20 | 5 | 4840807 | DPDM-20-5-S-PA | 4840821 | DPDM-Q-20-5-S-PA |
| | | 10 | 4840808 | DPDM-20-10-S-PA | 4840822 | DPDM-Q-20-10-S-PA |
| | | 15 | 4840809 | DPDM-20-15-S-PA | 4840823 | DPDM-Q-20-15-S-PA |
| | 25 | 5 | 4829799 | DPDM-25-5-S-PA | 4840835 | DPDM-Q-25-5-S-PA |
| | | 10 | 4829800 | DPDM-25-10-S-PA | 4840836 | DPDM-Q-25-10-S-PA |
| | | 15 | 4829801 | DPDM-25-15-S-PA | 4840837 | DPDM-Q-25-15-S-PA |
| | 32 | 5 | 4828428 | DPDM-32-5-S-PA | 4828490 | DPDM-Q-32-5-S-PA |
| | | 10 | 4828429 | DPDM-32-10-S-PA | 4828491 | DPDM-Q-32-10-S-PA |
| | | 15 | 4828430 | DPDM-32-15-S-PA | 4828492 | DPDM-Q-32-15-S-PA |

Ordering data – Single-acting – Pulling

| Type | Piston ø [mm] | Stroke [mm] | Without protection against torsion | | With protection against rotation | |
|--|------------------|----------------|------------------------------------|-----------------|----------------------------------|-------------------|
| | | | Part no. | Type | Part no. | Type |
|  | 6 | 5 | 4830946 | DPDM-6-5-P-PA | 4830974 | DPDM-Q-6-5-P-PA |
| | | 10 | 4830947 | DPDM-6-10-P-PA | 4830975 | DPDM-Q-6-10-P-PA |
| | | 15 | 4830948 | DPDM-6-15-P-PA | 4830976 | DPDM-Q-6-15-P-PA |
| | 10 | 5 | 4832170 | DPDM-10-5-P-PA | 4833140 | DPDM-Q-10-5-P-PA |
| | | 10 | 4832171 | DPDM-10-10-P-PA | 4833141 | DPDM-Q-10-10-P-PA |
| | | 15 | 4832172 | DPDM-10-15-P-PA | 4833142 | DPDM-Q-10-15-P-PA |
| | 16 | 5 | 4833321 | DPDM-16-5-P-PA | 4834380 | DPDM-Q-16-5-P-PA |
| | | 10 | 4833322 | DPDM-16-10-P-PA | 4834381 | DPDM-Q-16-10-P-PA |
| | | 15 | 4833323 | DPDM-16-15-P-PA | 4834382 | DPDM-Q-16-15-P-PA |
| | 20 | 5 | 4840810 | DPDM-20-5-P-PA | 4840832 | DPDM-Q-20-5-P-PA |
| | | 10 | 4840811 | DPDM-20-10-P-PA | 4840833 | DPDM-Q-20-10-P-PA |
| | | 15 | 4840812 | DPDM-20-15-P-PA | 4840834 | DPDM-Q-20-15-P-PA |
| | 25 | 5 | 4829866 | DPDM-25-5-P-PA | 4840838 | DPDM-Q-25-5-P-PA |
| | | 10 | 4829867 | DPDM-25-10-P-PA | 4840839 | DPDM-Q-25-10-P-PA |
| | | 15 | 4829868 | DPDM-25-15-P-PA | 4840840 | DPDM-Q-25-15-P-PA |
| | 32 | 5 | 4829129 | DPDM-32-5-P-PA | 4828499 | DPDM-Q-32-5-P-PA |
| | | 10 | 4829130 | DPDM-32-10-P-PA | 4828500 | DPDM-Q-32-10-P-PA |
| | | 15 | 4829131 | DPDM-32-15-P-PA | 4828501 | DPDM-Q-32-15-P-PA |

Ordering data – Modular product system

| Ordering data | 6 | 10 | 16 | 20 | 25 | 32 | Conditions | Code | Enter code |
|-----------------------------|--|-----------------------|--|-------------------------------|-------------------------------|-------------------------------|------------|-------------|------------|
| Module no. | 4674228 | 4693549 | 4186566 | 4654766 | 4328892 | 4650681 | | | |
| Function | Compact cylinder | | | | | | | DPDM | DPDM |
| Protection against rotation | None | | | | | | | | |
| | With protection against rotation | | | | | | | -Q | |
| Piston ø [mm] | 6 | 10 | 16 | 20 | 25 | 32 | | -... | |
| Stroke [mm] | 5, 10, 15, 20, 25, 30 | 5, 10, 15, 20, 25, 30 | 5, 10, 15, 20, 25, 30, 40, 50 | 5, 10, 15, 20, 25, 30, 40, 50 | 5, 10, 15, 20, 25, 30, 40, 50 | 5, 10, 15, 20, 25, 30, 40, 50 | | -... | |
| Function | Double-acting | | | | | | | | |
| | Single-acting, pulling | | | | | | [1] | -P | |
| | Single-acting, pushing | | | | | | [1] | -S | |
| Piston rod type | On one side | | | | | | | | |
| | - | | Through, hollow piston rod | | | | [2] | H | |
| | Through piston rod | | | | | | [2] | T | |
| Cushioning | Elastic cushioning rings/plates at both ends | | | | | | | -P | -P |
| Position sensing | Via proximity switch | | | | | | | A | A |
| Temperature range | Standard | | | | | | | | |
| | - | | Heat-resistant seals up to max. 120 °C | | | | [2] [3] | -T1 | |
| Special material properties | None | | | | | | | | |
| | Recommended for production plants for manufacturing Li-ion batteries | | | | | | [4] | F1A | |

[1] P, S Only with stroke 5, 10, 15 mm

[2] H, T, T1 Not with P, S

[3] T1 Not with H, T

[4] F1A Not with P, S, T1

Accessories

Ordering data – Piston rod attachments

| Designation | For ø | Part no. | Type |
|--|-------|----------|--------------|
| Rod eye SGS | | | |
|  | 10 | 9253 | SGS-M4 |
| | 16 | 9254 | SGS-M6 |
| | 20 | 9255 | SGS-M8 |
| | 25 | 9261 | SGS-M10x1.25 |
| | 32 | | |
| Rod clevis SG | | | |
|  | 10 | 6532 | SG-M4 |
| | 16 | 3110 | SG-M6 |
| | 20 | 3111 | SG-M8 |
| | 25 | 6144 | SG-M10x1.25 |
| | 32 | 6144 | SG-M10x1.25 |

Datasheets → Internet: piston rod attachment

| Designation | For ø | Part no. | Type |
|---|-------|----------|-----------------|
| Self-aligning rod coupler FK | | | |
|  | 10 | 6528 | FK-M4 |
| | 16 | 2061 | FK-M6 |
| | 20 | 2062 | FK-M8 |
| | 25 | 6140 | FK-M10x1.25 |
| | 32 | | |
| Adapter AD | | | |
|  | 10 | - | - |
| | 16 | 157328 | AD-M6-M5 |
| | | 157329 | AD-M6-1/8 |
| | 20 | 157331 | AD-M8-1/8 |
| | | 157332 | AD-M8-1/4 |
| | 25 | 157333 | AD-M10x1.25-1/8 |
| | | 157334 | AD-M10x1.25-1/4 |
| | 32 | 157333 | AD-M10x1.25-1/8 |
| | | 157334 | AD-M10x1.25-1/4 |

Ordering data – One-way flow control valves

Datasheets → Internet: grl

| | For ø | Connection | | Weight [g] | Part no. | Type |
|---|-------------------|------------|-----------------|------------|----------|--------------------|
| | | Thread | For tubing O.D. | | | |
| For exhaust air | | | | | | |
|  | 6, 10, 16, 20, 25 | M5 | 4 | 13 | 193138 | GRLA-M5-QS-4-D |
| | | | 6 | 13 | 193139 | GRLA-M5-QS-6-D |
| | | | 4 | 14 | 197577 | GRLA-M5-QS-4-RS-D |
| | | | 6 | 14 | 197578 | GRLA-M5-QS-6-RS-D |
| | 32 | G1/8 | 3 | 22 | 193144 | GRLA-1/8-QS-6-D |
| | | | 4 | 22 | 193145 | GRLA-1/8-QS-8-D |
| | | | 6 | 23 | 197581 | GRLA-1/8-QS-6-RS-D |
| | | | 8 | 24 | 534337 | GRLA-1/8-QS-8-RS-D |

Ordering data – Push-in fittings

Datasheets → Internet: qs

| | For ø | Connection | | Weight [g] | Part no. | Type | PU ¹⁾ |
|--|-------------------|------------|-----------------|------------|----------|-----------|------------------|
| | | Thread | For tubing O.D. | | | | |
| Standard | | | | | | | |
|  | 6, 10, 16, 20, 25 | M5 | 3 | 3.4 | 153302 | QSM-M5-3 | 10 |
| | | | 4 | 3.2 | 153304 | QSM-M5-4 | |
| | | | 6 | 4.5 | 153306 | QSM-M5-6 | |
|  | 6, 10, 16, 20, 25 | M5 | 4 | 3.4 | 153333 | QSML-M5-4 | |
| | | | 6 | 4.1 | 153335 | QSML-M5-6 | |
|  | 32 | G1/8 | 6 | 8.2 | 153002 | QS-1/8-6 | |
| | | | 8 | 14 | 153004 | QS-1/8-8 | |
|  | 32 | G1/8 | 6 | 11 | 153046 | QSL-1/8-6 | |
| | | | 8 | 14 | 153048 | QSL-1/8-8 | |

Accessories

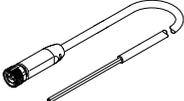
Proximity switches for piston diameter 6 ... 20

| Ordering data – Proximity switch for C-slot, magneto-resistive | | | | | | | Datasheets → Internet: smt |
|---|--|------------------|-----------------------|------------------|---------------|-----------------------------------|----------------------------|
| | Type of mounting | Switching output | Electrical connection | Cable length [m] | Part no. | Type | |
| N/O | | | | | | | |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP | Cable, 3-core | 2.5 m | 551373 | SMT-10M-PS-24V-E-2.5-L-OE | |
| | | PNP | 1x M8 plug, 3-pin | 0.3 m | 551375 | SMT-10M-PS-24V-E-0.3-L-M8D | |
| | | NPN | Cable, 3-core | 2.5 m | 551377 | SMT-10M-NS-24V-E-2.5-L-OE | |
| | | NPN | 1x M8 plug, 3-pin | 0.3 m | 551379 | SMT-10M-NS-24V-E-0.3-L-M8D | |

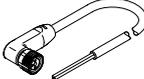
Proximity switches for piston diameter 25/32

| Ordering data – Proximity switch for T-slot, magneto-resistive | | | | | | | Datasheets → Internet: smt |
|--|--|------------------|-----------------------|------------------|---------------|----------------------------------|----------------------------|
| | Type of mounting | Switching output | Electrical connection | Cable length [m] | Part no. | Type | |
| N/O | | | | | | | |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP | Cable, 3-core | 2.5 | 574335 | SMT-8M-A-PS-24V-E-2.5-OE | |
| | | | Plug M8x1, 3-pin | 0.3 | 574334 | SMT-8M-A-PS-24V-E-0.3-M8D | |
| | | NPN | Cable, 3-core | 2.5 | 574338 | SMT-8M-A-NS-24V-E-2.5-OE | |
| | | | 1x M8 plug, 3-pin | 0.3 | 574339 | SMT-8M-A-NS-24V-E-0.3-M8D | |
| N/C | | | | | | | |
|  | Inserted in the slot from above, flush with the cylinder profile, short design | PNP | Cable, 3-core | 7.5 | 574340 | SMT-8M-A-PO-24V-E-7.5-OE | |

Connecting cables NEBA, straight, M8 connection

| | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length | Part no. | Type |
|---|--|--|---|--------------|----------------|------------------------------|
|  | M8x1 A-coded to EN 61076-2-104 | Open end | 3 | 2.5 m | 8078223 | NEBA-M8G3-U-2.5-N-LE3 |
| | | | | 5 m | 8078224 | NEBA-M8G3-U-5-N-LE3 |

Connecting cables NEBA, angled, M8 connection

| | Electrical connection 1, connection technology | Electrical connection 2, connection technology | Electrical connection 2, number of pins/cores | Cable length | Part no. | Type |
|---|--|--|---|--------------|----------------|------------------------------|
|  | M8x1 A-coded to EN 61076-2-104 | Open end | 3 | 2.5 m | 8078230 | NEBA-M8W3-U-2.5-N-LE3 |
| | | | | 5 m | 8078231 | NEBA-M8W3-U-5-N-LE3 |

Accessories

For variant DPDM...-T1, temperature range 0 ... +120 °C

Ordering data – One-way flow control valves

Datasheets → Internet: vfoh

| | For Ø | Connection | | Weight [g] | Part no. | Type |
|--|-------|------------|-----------------|------------|----------|------------------|
| | | Thread | For tubing O.D. | | | |
|  | 32 | G1/8 | 4 | 23 | 578797 | VFOH-LE-A-G18-Q4 |
| | | | 6 | 23 | 578798 | VFOH-LE-A-G18-Q6 |

Ordering data – Push-in fittings

Datasheets → Internet: crqs

| | For Ø | Connection | | Weight [g] | Part no. | Type |
|--|-------------------|------------|-----------------|------------|----------|--------------------------|
| | | Thread | For tubing O.D. | | | |
| Stainless steel | | | | | | |
|  | 6, 10, 16, 20, 25 | M5 | 4 | 6.0 | 162860 | CRQS-M5-4 ¹⁾ |
| | | | 6 | 8.4 | 162861 | CRQS-M5-6 ¹⁾ |
|  | 6, 10, 16, 20, 25 | M5 | 4 | 12 | 162870 | CRQSL-M5-4 ¹⁾ |
| | | | 6 | 18 | 162871 | CRQSL-M5-6 ¹⁾ |
|  | 32 | R1/8 | 6 | 9.9 | 162862 | CRQS-1/8-6 |
| | | | 8 | 12 | 162863 | CRQS-1/8-8 |
|  | 32 | R1/8 | 6 | 19 | 162872 | CRQSL-1/8-6 |
| | | | 8 | 26 | 162873 | CRQSL-1/8-8 |

1) With sealing ring

Ordering data – Proximity switch for T-slot, magnetic reed

Datasheets → Internet: sme

| | Type of mounting | Switching output | Electrical connection | Cable length [m] | Part no. | Type |
|-----|----------------------------|---------------------|-----------------------|------------------|----------|---------------|
| N/O | Heat resistant up to 120°C | Contacting, bipolar | Cable, 2-core | 2.5 | 161756 | SME-8-K-24-S6 |