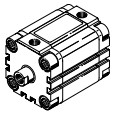
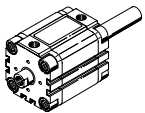
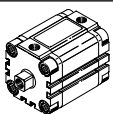
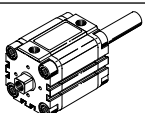
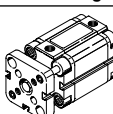
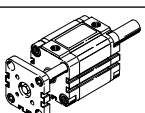


## Compact cylinder ADVU/AEVU

**FESTO**



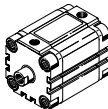
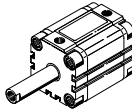
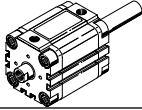
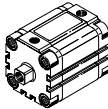
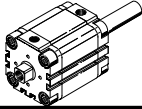
## Product range overview

| Function       | Version                                                                             | Type                               | Piston ∅<br>[mm] | Stroke<br>[mm]                        | Position sensing |   |
|----------------|-------------------------------------------------------------------------------------|------------------------------------|------------------|---------------------------------------|------------------|---|
| Double-acting  | Basic version                                                                       |                                    |                  |                                       |                  |   |
|                |    | ADVU<br>Piston rod at one end      | 12, 16           | 5, 10, 15, 20, 25, 30, 40             | 1 ... 200        | ■ |
|                |                                                                                     |                                    | 20, 25           | 5, 10, 15, 20, 25, 30, 40, 50         | 1 ... 200        |   |
|                |                                                                                     |                                    | 32, 40           | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 | 1 ... 300        |   |
|                |                                                                                     |                                    | 50, 63           | 10, 15, 20, 25, 30, 40, 50, 60, 80    | 1 ... 300        |   |
|                |                                                                                     |                                    | 80, 100, 125     | 10, 15, 20, 25, 30, 40, 50, 60, 80    | 1 ... 400        |   |
|                |    | ADVU-...S2<br>Through piston rod   | 12, 16, 20, 25   | –                                     | 1 ... 200        | ■ |
|                |                                                                                     |                                    | 32, 40, 50, 63   | –                                     | 1 ... 300        |   |
|                |                                                                                     |                                    | 80, 100, 125     | –                                     | 1 ... 400        |   |
|                |                                                                                     |                                    |                  |                                       |                  |   |
|                | Protected against rotation with square piston rod                                   |                                    |                  |                                       |                  |   |
|                |    | ADVULQ<br>Piston rod at one end    | 12, 16           | 5, 10, 15, 20, 25, 30, 40             | 1 ... 200        | ■ |
|                |                                                                                     |                                    | 20, 25           | 5, 10, 15, 20, 25, 30, 40, 50         | 1 ... 200        |   |
|                |                                                                                     |                                    | 32, 40           | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 | 1 ... 300        |   |
|                |                                                                                     |                                    | 50, 63           | 10, 15, 20, 25, 30, 40, 50, 60, 80    | 1 ... 300        |   |
|                |                                                                                     |                                    | 80, 100          | 10, 15, 20, 25, 30, 40, 50, 60, 80    | 1 ... 400        |   |
|                |    | ADVULQ-...S2<br>Through piston rod | 12, 16, 20, 25   | –                                     | 1 ... 200        | ■ |
|                |                                                                                     |                                    | 32, 40, 50, 63   | –                                     | 1 ... 300        |   |
|                |                                                                                     |                                    | 80, 100          | –                                     | 1 ... 400        |   |
|                |                                                                                     |                                    |                  |                                       |                  |   |
|                | Non-rotating with yoke                                                              |                                    |                  |                                       |                  |   |
|                |  | ADVUL<br>Piston rod at one end     | 12, 16           | 5, 10, 15, 20, 25, 30, 40             | 1 ... 200        | ■ |
|                |                                                                                     |                                    | 20, 25           | 5, 10, 15, 20, 25, 30, 40, 50         | 1 ... 200        |   |
|                |                                                                                     |                                    | 32, 40           | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 | 1 ... 300        |   |
|                |                                                                                     |                                    | 50, 63           | 10, 15, 20, 25, 30, 40, 50, 60, 80    | 1 ... 300        |   |
|                |                                                                                     |                                    | 80, 100          | 10, 15, 20, 25, 30, 40, 50, 60, 80    | 1 ... 400        |   |
|                |  | ADVUL-...S2<br>Through piston rod  | 12, 16, 20, 25   | –                                     | 1 ... 200        | ■ |
| 32, 40, 50, 63 |                                                                                     |                                    | –                | 1 ... 300                             |                  |   |
| 80, 100        |                                                                                     |                                    | –                | 1 ... 400                             |                  |   |
|                |                                                                                     |                                    |                  |                                       |                  |   |

## Product range overview

| Type                                              | Piston rod         |                  | S20<br>Hollow piston rod | S6<br>Heat-resistant up to 120°C | R3<br>Increased corrosion protection | → Page/Internet |
|---------------------------------------------------|--------------------|------------------|--------------------------|----------------------------------|--------------------------------------|-----------------|
|                                                   | With female thread | With male thread |                          |                                  |                                      |                 |
| Basic version                                     |                    |                  |                          |                                  |                                      |                 |
| ADVU<br>Piston rod at one end                     | ■                  | ■                | –                        | ■                                | ■                                    | 11              |
| ADVU-...-S2<br>Through piston rod                 | ■                  | ■                | ■<br>Ø 12 ... 100        | ■<br>Ø 12 ... 100                | –                                    | 11              |
|                                                   |                    |                  |                          |                                  |                                      |                 |
| Protected against rotation with square piston rod |                    |                  |                          |                                  |                                      |                 |
| ADVULQ<br>Piston rod at one end                   | ■                  | ■                | –                        | ■                                | –                                    | 22              |
| ADVULQ-...-S2<br>Through piston rod               | ■                  | ■                | ■<br>Ø 16 ... 100        | ■                                | –                                    | 22              |
|                                                   |                    |                  |                          |                                  |                                      |                 |
| Non-rotating with yoke                            |                    |                  |                          |                                  |                                      |                 |
| ADVUL<br>Piston rod at one end                    | ■                  | –                | –                        | ■                                | –                                    | 22              |
| ADVUL-...-S2<br>Through piston rod                | ■                  | –                | –                        | –                                | –                                    | 22              |
|                                                   |                    |                  |                          |                                  |                                      |                 |

Product range overview

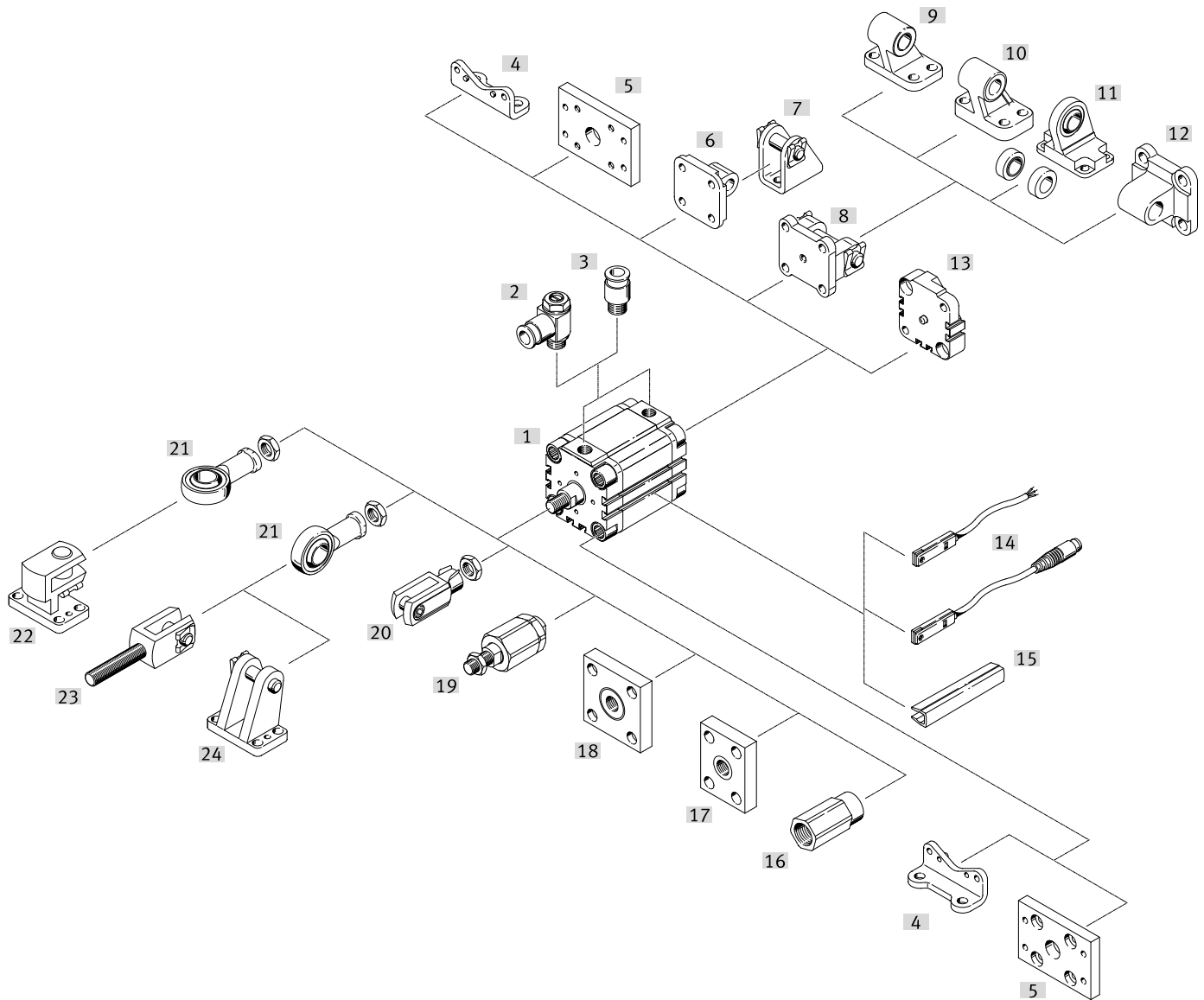
| Function      | Version                                                                            | Type                                           | Piston $\varnothing$<br>[mm]        | Stroke<br>[mm]    | Position<br>sensing |   |
|---------------|------------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------|-------------------|---------------------|---|
| Single-acting | Basic version                                                                      |                                                |                                     |                   |                     |   |
|               |   | AEVU<br>Piston rod at one end<br>Pushing       | 12                                  | 5, 10             | 1 ... 10            | ■ |
|               |                                                                                    |                                                | 16, 20, 25, 32, 40                  | 5, 10, 15, 20, 25 | 1 ... 25            |   |
|               |                                                                                    |                                                | 50, 63, 80, 100                     | 10, 15, 20, 25    | 1 ... 25            |   |
|               |   | AEVUZ<br>Piston rod at one end<br>Pulling      | 12                                  | 5, 10             | 1 ... 10            | ■ |
|               |                                                                                    |                                                | 16, 20, 25, 32, 40                  | 5, 10, 15, 20, 25 | 1 ... 25            |   |
|               |                                                                                    |                                                | 50, 63, 80, 100                     | 10, 15, 20, 25    | 1 ... 25            |   |
|               |   | AEVU-....S2<br>Through piston rod<br>Pushing   | 12                                  | –                 | 1 ... 10            | ■ |
|               |                                                                                    |                                                | 16, 20, 25, 32, 40, 50, 63, 80, 100 | –                 | 1 ... 25            |   |
|               |                                                                                    |                                                |                                     |                   |                     |   |
|               | Protected against rotation with square piston rod                                  |                                                |                                     |                   |                     |   |
|               |   | AEVULQ<br>Piston rod at one end<br>Pushing     | 16, 20, 25, 32, 40                  | 5, 10, 15, 20, 25 | 1 ... 25            | ■ |
|               |                                                                                    |                                                | 50, 63, 80, 100                     | 10, 15, 20, 25    | 1 ... 25            |   |
|               |  | AEVULQ-....S2<br>Through piston rod<br>Pushing | 16, 20, 25, 32, 40, 50, 63, 80, 100 | –                 | 1 ... 25            | ■ |
|               |                                                                                    |                                                |                                     |                   |                     |   |

## Product range overview

| Type                                              | Piston rod         |                  | S20<br>Hollow piston rod | S6<br>Heat-resistant up to<br>120°C | R3<br>Increased corrosion<br>protection | → Page/Internet |
|---------------------------------------------------|--------------------|------------------|--------------------------|-------------------------------------|-----------------------------------------|-----------------|
|                                                   | With female thread | With male thread |                          |                                     |                                         |                 |
| Basic version                                     |                    |                  |                          |                                     |                                         |                 |
| AEVU<br>Piston rod at one<br>end<br>Pushing       | ■                  | ■                | –                        | ■                                   | –                                       | 33              |
|                                                   |                    |                  |                          |                                     |                                         |                 |
| AEVUZ<br>Piston rod at one<br>end<br>Pulling      | ■                  | ■                | –                        | ■                                   | –                                       | 33              |
|                                                   |                    |                  |                          |                                     |                                         |                 |
| AEVU-...S2<br>Through piston rod<br>Pushing       | ■                  | ■                | ■                        | ■                                   | –                                       | 33              |
|                                                   |                    |                  |                          |                                     |                                         |                 |
| Protected against rotation with square piston rod |                    |                  |                          |                                     |                                         |                 |
| AEVULQ<br>Piston rod at one<br>end<br>Pushing     | ■                  | ■                | –                        | –                                   | –                                       | 43              |
|                                                   |                    |                  |                          |                                     |                                         |                 |
| AEVULQ-...S2<br>Through piston rod<br>Pushing     | ■                  | ■                | –                        | –                                   | –                                       | 43              |
|                                                   |                    |                  |                          |                                     |                                         |                 |

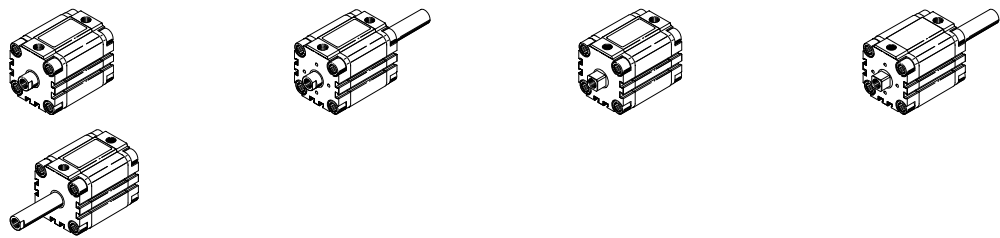
Peripherals overview

Piston Ø 12 ... 100 mm



Variants

|         |        |        |        |
|---------|--------|--------|--------|
| ADVU    |        | ADVULQ |        |
| AEVU(Z) |        | AEVULQ |        |
|         | S2/S20 |        | S2/S20 |



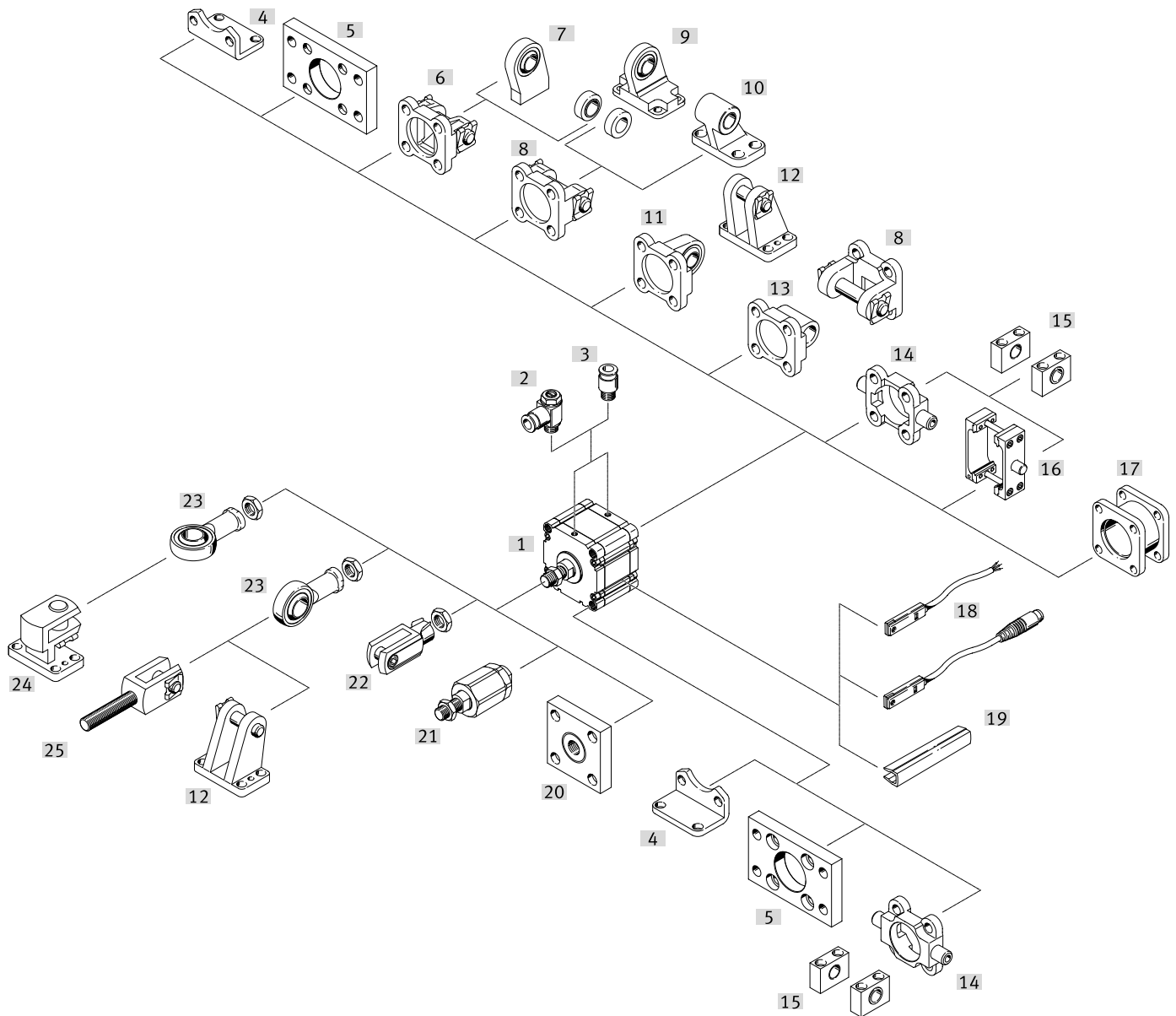
## Peripherals overview

| Mounting attachments and accessories |                                                     | Description                                                                                  | ADVU<br>AEVU(Z) |          | ADVULQ<br>AEVULQ |          | → Page/Internet |
|--------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------|----------|------------------|----------|-----------------|
|                                      |                                                     |                                                                                              |                 | S2/S20   |                  | S2/S20   |                 |
| [1]                                  | Compact cylinder<br>ADVU/AEUV                       |                                                                                              |                 |          |                  |          |                 |
| [2]                                  | One-way flow control valve<br>GRLA/GRLZ             | For regulating speed                                                                         | ■               | ■        | ■                | ■        | 59              |
| [3]                                  | Push-in fitting<br>QS                               | For connecting tubing with standard O.D.                                                     | ■               | ■        | ■                | ■        | qs              |
| [4]                                  | Foot mounting<br>HUA/HUA-...-R3                     | For bearing and end caps                                                                     | ■               | ■        | ■                | ■        | 49              |
| [5]                                  | Flange mounting<br>FUA                              | For bearing or end caps                                                                      | ■               | ■        | ■                | ■        | 50              |
| [6]                                  | Swivel flange<br>SUA/SUA-...-R3<br>for Ø 12 ... 25  | For end caps                                                                                 | ■               | –        | ■                | –        | 51              |
| [7]                                  | Clevis foot<br>LBN/CRLBN                            | –                                                                                            | ■               | –        | ■                | –        | 56              |
| [8]                                  | Swivel flange<br>SUA/SUA-...-R3<br>for Ø 32 ... 100 | For end caps                                                                                 | ■               | –        | ■                | –        | 51              |
| [9]                                  | Clevis foot<br>LN                                   | –                                                                                            | ■               | –        | ■                | –        | 56              |
| [10]                                 | Clevis foot<br>LNG/CRLNG                            | –                                                                                            | ■               | –        | ■                | –        | 56              |
| [11]                                 | Clevis foot<br>LSN                                  | With spherical bearing                                                                       | ■               | –        | ■                | –        | 56              |
| [12]                                 | Swivel flange<br>SNCL                               | –                                                                                            | ■               | –        | ■                | –        | 56              |
| [13]                                 | Mounting kit<br>DPVU                                | For connecting two cylinders with the same piston diameter to form a multi-position cylinder | ■               | –        | ■                | –        | 55              |
| [14]                                 | Proximity switch<br>SME/SMT-8                       | Can be integrated in the cylinder profile barrel                                             | ■               | ■        | ■                | ■        | 60              |
| [15]                                 | Slot cover<br>ABP-5-S                               | For protecting the sensor cables and the sensor slots from contamination                     | ■               | ■        | ■                | ■        | 60              |
| [16]                                 | Adapter<br>AD                                       | For suction cup                                                                              | –               | ■<br>S20 | –                | ■<br>S20 | 58              |
| [17]                                 | Coupling piece<br>KSZ                               | For cylinders with a non-rotating piston rod to compensate for radial deviations             | –               | –        | ■                | ■        | 58              |
| [18]                                 | Coupling piece<br>KSG                               | To compensate for radial deviations                                                          | ■               | ■        | –                | –        | 58              |
| [19]                                 | Rod eye<br>SGS/CRSGS                                | With spherical bearing                                                                       | ■               | ■        | –                | –        | 58              |
| [20]                                 | Right-angle clevis foot<br>LQG                      | –                                                                                            | ■               | ■        | –                | –        | 56              |
| [21]                                 | Self-aligning rod coupler<br>FK/CRFK                | To compensate for radial and angular deviations                                              | ■               | ■        | –                | –        | 58              |
| [22]                                 | Rod clevis<br>SG/CRSG                               | Permits a swivelling movement of the cylinder in one plane                                   | ■               | ■        | ■                | ■        | 58              |
| [23]                                 | Rod clevis<br>SGA                                   | With male thread                                                                             | ■               | ■        | –                | –        | 58              |
| [24]                                 | Clevis foot<br>LBG/LBG-...-R3                       | –                                                                                            | ■               | ■        | –                | –        | 56              |

1) Only in combination with end cap

## Peripherals overview

Piston Ø 125 mm



## Peripherals overview

| Mounting attachments and accessories |                                         | Description                                                                                  | ADVU |    | → Page/Internet |
|--------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------|------|----|-----------------|
|                                      |                                         |                                                                                              |      | S2 |                 |
| [1]                                  | Compact cylinder<br>ADVU                |                                                                                              |      |    |                 |
| [2]                                  | One-way flow control valve<br>GRLA/GRLZ | For regulating speed                                                                         | ■    | ■  | 59              |
| [3]                                  | Push-in fitting<br>QS                   | For connecting tubing with standard O.D.                                                     | ■    | ■  | qs              |
| [4]                                  | Foot mounting<br>HNC/CRHNC              | For bearing and end caps                                                                     | ■    | ■  | 49              |
| [5]                                  | Flange mounting<br>FNC                  | For bearing or end caps                                                                      | ■    | ■  | 50              |
| [6]                                  | Swivel flange<br>SNC                    | For end caps                                                                                 | ■    | —  | 52              |
| [7]                                  | Clevis foot<br>LSNSG                    | Weld-on, with spherical bearing                                                              | ■    | —  | 56              |
| [8]                                  | Swivel flange<br>SNCB/SNCB-...-R3       | For end caps                                                                                 | ■    | —  | 52              |
| [9]                                  | Clevis foot<br>LSN                      | With spherical bearing                                                                       | ■    | —  | 56              |
| [10]                                 | Clevis foot<br>LN                       | —                                                                                            | ■    | —  | 56              |
| [11]                                 | Swivel flange<br>SNCS/SNCS-...-R3       | With spherical bearing for end caps                                                          | ■    | —  | 53              |
| [12]                                 | Clevis foot<br>LBG/LBG-...-R3           | —                                                                                            | ■    | ■  | 56              |
| [13]                                 | Swivel flange<br>SNCL                   | For end caps                                                                                 | ■    | —  | 53              |
| [14]                                 | Trunnion flange<br>ZNCF                 | For bearing or end caps                                                                      | ■    | ■  | 54              |
| [15]                                 | Trunnion support<br>LNZG/CRLNZG         | —                                                                                            | ■    | ■  | 56              |
| [16]                                 | Trunnion mounting kit<br>DAMT           | For mounting anywhere along the cylinder profile barrel                                      | ■    | ■  | 54              |
| [17]                                 | Mounting kit<br>DPNC                    | For connecting two cylinders with the same piston diameter to form a multi-position cylinder | ■    | ■  | 55              |
| [18]                                 | Proximity switch<br>SME/SMT-8           | Can be integrated in the cylinder profile barrel                                             | ■    | ■  | 60              |
| [19]                                 | Slot cover<br>ABP-5-S                   | For protecting the sensor cables and the sensor slots from contamination                     | ■    | ■  | 60              |
| [20]                                 | Coupling piece<br>KSG                   | To compensate for radial deviations                                                          | ■    | ■  | 58              |
| [21]                                 | Self-aligning rod coupler<br>FK/CRFK    | To compensate for radial and angular deviations                                              | ■    | ■  | 58              |
| [22]                                 | Rod clevis<br>SG/CRSG                   | Permits a swivelling movement of the cylinder in one plane                                   | ■    | ■  | 58              |
| [23]                                 | Rod eye<br>SGS/CRSGS                    | With spherical bearing                                                                       | ■    | ■  | 58              |
| [24]                                 | Right-angle clevis foot<br>LQG          | —                                                                                            | ■    | ■  | 56              |
| [25]                                 | Rod clevis<br>SGA                       | With male thread                                                                             | ■    | ■  | 58              |

## Type codes

| 001    | Series                                             |  |
|--------|----------------------------------------------------|--|
| ADVU   | Compact cylinder, double-acting                    |  |
| ADVULQ | Compact cylinder, double-acting, square piston rod |  |
| AEVU   | Compact cylinder, single-acting                    |  |
| AEVUZ  | Compact cylinder, single-acting, pulling           |  |
| AEVULQ | Compact cylinder, single-acting, square piston rod |  |

| 002 | Piston diameter [mm] |  |
|-----|----------------------|--|
| 12  | 12                   |  |
| 16  | 16                   |  |
| 20  | 20                   |  |
| 25  | 25                   |  |
| 32  | 32                   |  |
| 40  | 40                   |  |
| 50  | 50                   |  |
| 63  | 63                   |  |
| 80  | 80                   |  |
| 100 | 100                  |  |
| 125 | 125                  |  |

| 003 | Stroke range [mm] |  |
|-----|-------------------|--|
| ... | 1 ... 400         |  |

| 004 | Piston rod thread type |  |
|-----|------------------------|--|
|     | Female thread          |  |
| A   | Male thread            |  |

| 005 | Cushioning                                    |  |
|-----|-----------------------------------------------|--|
| P   | Elastic cushioning rings/plates on both sides |  |

| 006 | Position sensing     |  |
|-----|----------------------|--|
| A   | For proximity sensor |  |

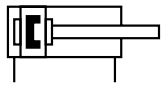
| 007 | Piston rod type            |  |
|-----|----------------------------|--|
|     | At one end                 |  |
| S2  | Through piston rod         |  |
| S20 | Through, hollow piston rod |  |

| 008 | Temperature range                |  |
|-----|----------------------------------|--|
|     | Standard                         |  |
| S6  | Heat-resistant seals max. 120 °C |  |

| 009 | Corrosion protection      |  |
|-----|---------------------------|--|
|     | Standard                  |  |
| R3  | High corrosion protection |  |

## Datasheet – Double-acting, basic version

## Function

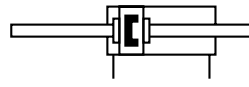


Ø - Diameter  
12 ... 125 mm

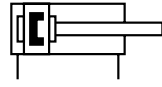
l - Stroke length  
1 ... 400 mm

 www.festo.com  
Sets of wearing parts  
→ page 21

## Variants



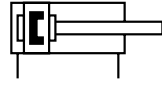
S2



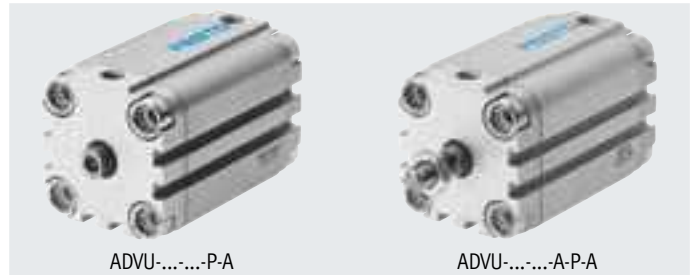
S6



S20



R3



## General technical data

| General technical data                 |               | 12                                                             | 16 | 20       | 25 | 32   | 40   | 50       | 63   | 80      | 100     | 125   |
|----------------------------------------|---------------|----------------------------------------------------------------|----|----------|----|------|------|----------|------|---------|---------|-------|
| Piston Ø                               |               | M5                                                             | M5 | M5       | M5 | G1/8 | G1/8 | G1/8     | G1/8 | G1/8    | G1/4    | G1/4  |
| Piston rod end                         | Female thread | M3                                                             | M4 | M5       | M5 | M6   | M6   | M8       | M8   | M10     | M12     | M16   |
|                                        | Male thread   | M6                                                             | M8 | M10x1.25 |    |      |      | M12x1.25 |      | M16x1.5 | M20x1.5 | M27x2 |
| Operating medium                       |               | Compressed air to ISO 8573-1:2010 [7:4:4]                      |    |          |    |      |      |          |      |         |         |       |
| Note on the operating/<br>pilot medium |               | Lubricated operation possible (required for further operation) |    |          |    |      |      |          |      |         |         |       |
| Design                                 |               | Piston                                                         |    |          |    |      |      |          |      |         |         |       |
|                                        |               | Piston rod                                                     |    |          |    |      |      |          |      |         |         |       |
| Cushioning                             |               | Elastic cushioning rings/plates at both ends                   |    |          |    |      |      |          |      |         |         |       |
| Position sensing                       |               | Via proximity switch                                           |    |          |    |      |      |          |      |         |         |       |
| Type of mounting                       |               | With through-hole                                              |    |          |    |      |      |          |      |         |         |       |
|                                        |               | With female thread                                             |    |          |    |      |      |          |      |         |         |       |
|                                        |               | Via accessories                                                |    |          |    |      |      |          |      |         |         |       |
| Mounting position                      |               | Any                                                            |    |          |    |      |      |          |      |         |         |       |

 Note: This product conforms to ISO 1179-1 and ISO 228-1

## Operating pressure

| Piston Ø                  |       | 12           | 16           | 20           | 25 | 32           | 40 | 50           | 63 | 80          | 100 | 125 |
|---------------------------|-------|--------------|--------------|--------------|----|--------------|----|--------------|----|-------------|-----|-----|
| Piston rod at one end     | [MPa] | 0.12 ... 1   |              | 0.1 ... 1    |    | 0.08 ... 1   |    | 0.06 ... 1   |    | 0.05 ... 1  |     |     |
|                           | [bar] | 1.2 ... 10   |              | 1 ... 10     |    | 0.8 ... 10   |    | 0.6 ... 10   |    | 0.5 ... 10  |     |     |
|                           | [psi] | 17.4 ... 145 |              | 14.5 ... 145 |    | 11.6 ... 145 |    | 8.7 ... 145  |    | 7.3 ... 145 |     |     |
| Through piston rod S2/S20 | [MPa] | 0.15 ... 1   | 0.13 ... 1   | 0.12 ... 1   |    | 0.1 ... 1    |    | 0.08 ... 1   |    | –           |     |     |
|                           | [bar] | 1.5 ... 10   | 1.3 ... 10   | 1.2 ... 10   |    | 1 ... 10     |    | 0.8 ... 10   |    | –           |     |     |
|                           | [psi] | 21.8 ... 145 | 18.9 ... 145 | 17.4 ... 145 |    | 14.5 ... 145 |    | 11.6 ... 145 |    | –           |     |     |

## Environmental conditions

| Environmental conditions          |               |             |             |
|-----------------------------------|---------------|-------------|-------------|
| Compact cylinder                  | Basic version | S6          | R3          |
| Ambient temperature <sup>1)</sup> | [°C]          | –20 ... +80 | 0 ... +120  |
| CRC <sup>2)</sup>                 | 2             | 2           | –20 ... +80 |
|                                   |               |             | 3           |

1) Note operating range of proximity switches

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

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

Datasheet – Double-acting, basic version

| Forces [N] and impact energy [J]                            |        |      |      |      |      |      |      |      |      |      |      |      |
|-------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|
| Piston Ø                                                    |        | 12   | 16   | 20   | 25   | 32   | 40   | 50   | 63   | 80   | 100  | 125  |
| Theoretical force at 0.6 MPa<br>(6 bar, 87 psi), advancing  |        | 68   | 121  | 188  | 295  | 483  | 754  | 1178 | 1870 | 3016 | 4712 | 7363 |
|                                                             | S2/S20 | 51   | 90   | 141  | 247  | 415  | 686  | 1057 | 1750 | 2827 | 4418 | 6881 |
| Theoretical force at 0.6 MPa<br>(6 bar, 87 psi), retracting |        | 51   | 90   | 141  | 247  | 415  | 686  | 1057 | 1750 | 2827 | 4418 | 6881 |
|                                                             | S2/S20 | 51   | 90   | 141  | 247  | 415  | 686  | 1057 | 1750 | 2827 | 4418 | 6881 |
| Max. impact energy in the end<br>positions                  |        | 0.07 | 0.10 | 0.14 | 0.30 | 0.40 | 0.52 | 0.64 | 0.70 | 0.75 | 1.00 | 3.3  |
|                                                             | S20    | 0.01 | 0.01 | 0.01 | 0.01 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.10 | 0.40 |

Maximum permissible mass:

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

Permissible impact velocity:

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

 **Note**

ProPneu engineering software  
→ [www.festo.com](http://www.festo.com)

v Permissible impact velocity

E Max. impact energy

m<sub>1</sub> Moving mass (drive)

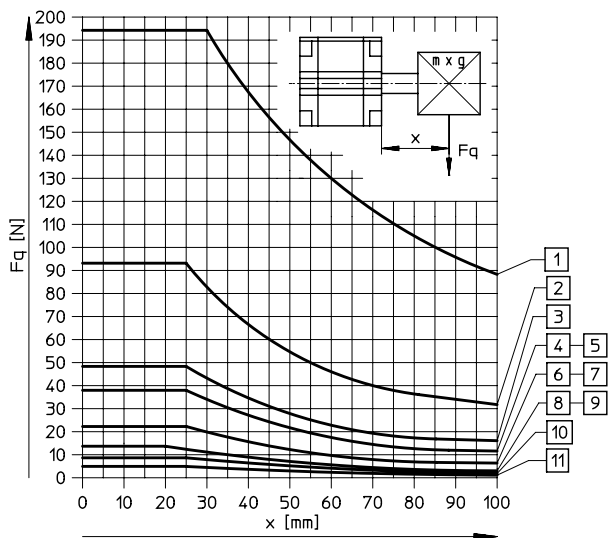
m<sub>2</sub> Moving payload

 **Note**

These specifications represent the maximum values that can be achieved. The maximum permissible impact energy must be observed.

Max. lateral force F<sub>q</sub> as a function of projection x

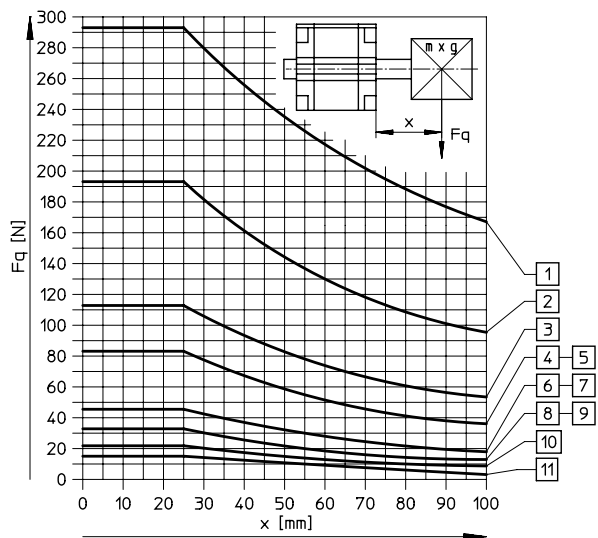
Piston rod at one end



- [1] Ø 125 mm  
[2] Ø 100 mm  
[3] Ø 80 mm  
[4] Ø 63 mm

- [5] Ø 50 mm  
[6] Ø 40 mm  
[7] Ø 32 mm  
[8] Ø 25 mm

Through piston rod



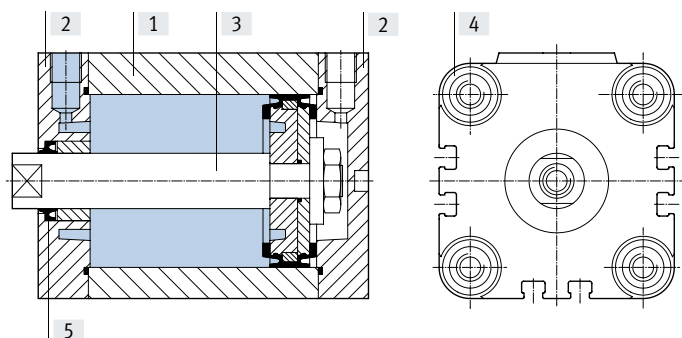
- [9] Ø 20 mm  
[10] Ø 16 mm  
[11] Ø 12 mm

## Datasheet – Double-acting, basic version

| Weight [g]                         |    |    |     |     |     |     |     |      |      |      |      |
|------------------------------------|----|----|-----|-----|-----|-----|-----|------|------|------|------|
| Piston Ø                           | 12 | 16 | 20  | 25  | 32  | 40  | 50  | 63   | 80   | 100  | 125  |
| Product weight with 0 mm stroke    | 87 | 89 | 149 | 180 | 300 | 433 | 560 | 1059 | 1772 | 2797 | 3426 |
| Additional weight per 10 mm stroke | 15 | 15 | 23  | 28  | 40  | 59  | 72  | 107  | 168  | 177  | 168  |
| Moving mass with 0 mm stroke       | 8  | 12 | 20  | 26  | 49  | 63  | 112 | 134  | 307  | 614  | 1317 |
| Additional mass per 10 mm stroke   | 2  | 4  | 6   | 6   | 9   | 9   | 16  | 16   | 25   | 38   | 63   |

## Materials

Sectional view



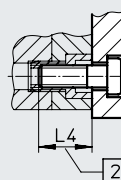
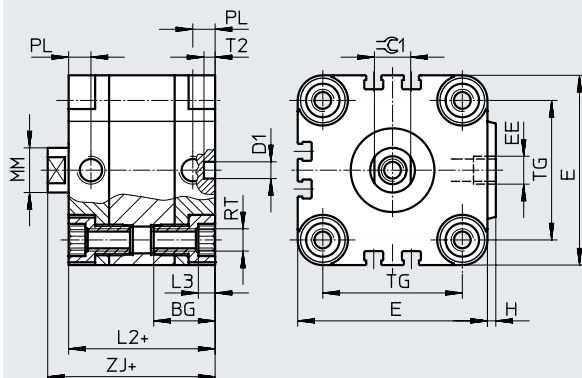
| Compact cylinder    |              | Basic version              | S6                         | R3                         |
|---------------------|--------------|----------------------------|----------------------------|----------------------------|
| [1] Cylinder barrel |              | Wrought aluminium alloy    | Wrought aluminium alloy    | Wrought aluminium alloy    |
| [2] Cover           |              | Wrought aluminium alloy    | Wrought aluminium alloy    | Wrought aluminium alloy    |
| [3] Piston rod      | Ø 12 ... 32  | High-alloy stainless steel | High-alloy stainless steel | High-alloy stainless steel |
|                     | Ø 40 ... 125 | High-alloy steel           | High-alloy steel           | High-alloy stainless steel |
| [4] Flange screws   | Ø 12 ... 16  | High-alloy stainless steel | High-alloy stainless steel | High-alloy stainless steel |
|                     | Ø 20 ... 125 | Galvanised steel           | Galvanised steel           | High-alloy stainless steel |
| [5] Dynamic seals   |              | Polyurethane               | Fluoro rubber              | Polyurethane               |

Datasheet – Double-acting, basic version

Dimensions – Basic cylinder

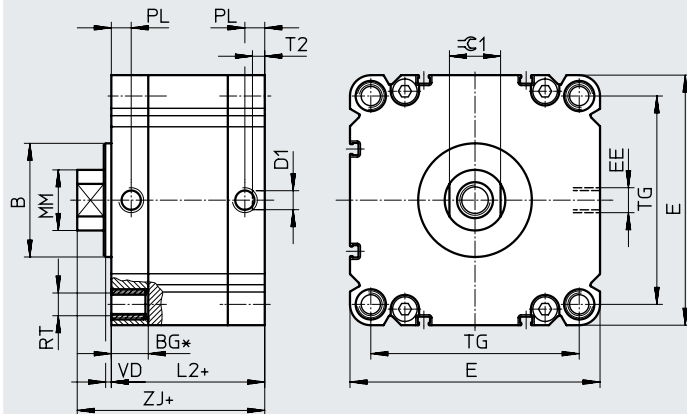
Download CAD data → [www.festo.com](http://www.festo.com)

Piston Ø 12 ... 100 mm



 **Note**  
To mount from above with piston diameter 12 and 16 mm, only use 2 diagonal screws or use non-magnetic screws.  
+ = plus stroke length  
[2] Minimum screw-in depth

Piston Ø 125 mm



 **Note**  
\* Minimum screw-in depth 18mm.  
Cannot be screwed through with socket head screw.  
+ = plus stroke length

| Ø    | B   | BG   | D1   | E   | EE   | H   | L2   | L3 | L4 | MM | PL   | RT  | T2   | TG  | VD | ZJ   | ⌀1  |
|------|-----|------|------|-----|------|-----|------|----|----|----|------|-----|------|-----|----|------|-----|
| [mm] | d11 |      | Ø H9 |     |      |     |      |    |    | Ø  |      |     | ±0.2 |     |    |      | h13 |
| 12   | –   | 18.5 | 6    | 29  | M5   | 1   | 38   | 3  | 16 | 6  | 8    | M4  | 4    | 18  | –  | 42.5 | 5   |
| 16   | –   | 18.5 | 6    | 29  | M5   | 1   | 38   | 3  | 16 | 8  | 8    | M4  | 4    | 18  | –  | 42.5 | 7   |
| 20   | –   | 18.5 | 6    | 36  | M5   | 1.5 | 38   | 4  | 18 | 10 | 8    | M5  | 4    | 22  | –  | 42.5 | 9   |
| 25   | –   | 18.5 | 6    | 40  | M5   | 1.5 | 39.5 | 4  | 18 | 10 | 8    | M5  | 4    | 26  | –  | 45   | 9   |
| 32   | –   | 21.5 | 6    | 50  | G1/8 | 2   | 44.5 | 5  | 20 | 12 | 8    | M6  | 4    | 32  | –  | 50.5 | 10  |
| 40   | –   | 21.5 | 6    | 60  | G1/8 | 2.5 | 45.5 | 5  | 20 | 12 | 8    | M6  | 4    | 42  | –  | 52   | 10  |
| 50   | –   | 22   | 6    | 68  | G1/8 | 3   | 45.5 | 6  | 20 | 16 | 8    | M8  | 4    | 50  | –  | 53   | 13  |
| 63   | –   | 24.5 | 8    | 87  | G1/8 | 4   | 50   | 8  | 25 | 16 | 8    | M10 | 4    | 62  | –  | 57.5 | 13  |
| 80   | –   | 27.5 | 8    | 107 | G1/8 | 4   | 56   | 8  | 25 | 20 | 8.5  | M10 | 4    | 82  | –  | 64   | 17  |
| 100  | –   | 32.5 | 8    | 128 | G1/4 | 5   | 66.5 | 8  | 25 | 25 | 10.5 | M10 | 4    | 103 | –  | 76.5 | 22  |
| 125  | 60  | 19.5 | 10   | 132 | G1/4 | –   | 81   | –  | 18 | 32 | 10.5 | M12 | 6    | 110 | 4  | 99   | 27  |

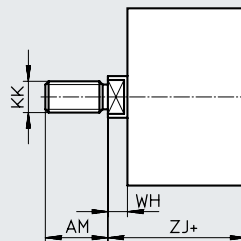
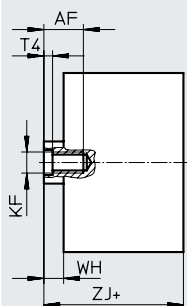
 **Note**  
This product conforms to ISO 1179-1 and ISO 228-1

## Datasheet – Double-acting, basic version

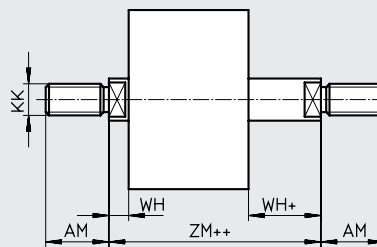
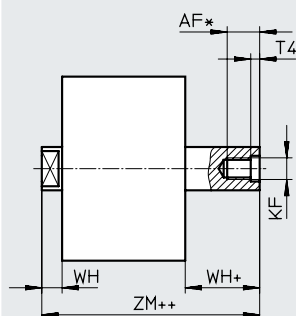
## Dimensions – Variants

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

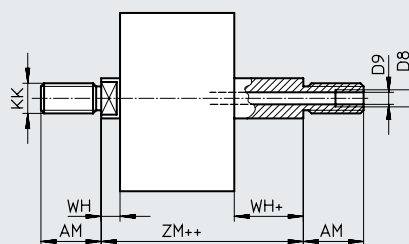
## Basic version



## S2 – Through piston rod



## S20 – Through, hollow piston rod



+ = plus stroke length

++ = plus 2x stroke length

| ∅<br>[mm]         | AF               | AM | D8   | D9<br>∅ | KF  | KK       | T4  | WH  | ZJ   | ZM   |
|-------------------|------------------|----|------|---------|-----|----------|-----|-----|------|------|
| 12                | 8                | 16 | –    | 2.3     | M3  | M6       | 1.5 | 4.5 | 42.5 | 47   |
| 16                | 10               | 20 | –    | 3.2     | M4  | M8       | 1.5 | 4.5 | 42.5 | 47   |
| 20 <sup>2)</sup>  | 12               | 22 | –    | 3.8     | M5  | M10x1.25 | 2   | 4.5 | 42.5 | 47   |
| 25 <sup>2)</sup>  | 12               | 22 | –    | 3.8     | M5  | M10x1.25 | 2   | 5.5 | 45   | 50.5 |
| 32 <sup>2)</sup>  | 14               | 22 | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6   | 50.5 | 56.5 |
| 40 <sup>2)</sup>  | 14               | 22 | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6.5 | 52   | 58.5 |
| 50 <sup>2)</sup>  | 16               | 24 | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 53   | 60.5 |
| 63 <sup>2)</sup>  | 16               | 24 | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 57.5 | 65   |
| 80 <sup>2)</sup>  | 20 <sup>1)</sup> | 32 | G1/8 | 8       | M10 | M16x1.5  | 4.7 | 8   | 64   | 72   |
| 100 <sup>2)</sup> | 24 <sup>1)</sup> | 40 | G1/4 | 11.7    | M12 | M20x1.5  | 6.1 | 10  | 76.5 | 86.5 |
| 125 <sup>2)</sup> | 25 <sup>1)</sup> | 54 | –    | –       | M16 | M27x2    | 7   | 18  | 99   | 117  |

1) With a stroke &lt; 5 mm, the maximum screw-in depth is reduced by 5 mm

2) Nut for piston rod thread included in the scope of delivery

## Datasheet – Double-acting, basic version

| Ordering data – Basic design |                |                               |                |                             |                  |
|------------------------------|----------------|-------------------------------|----------------|-----------------------------|------------------|
| Piston Ø<br>[mm]             | Stroke<br>[mm] | Piston rod with female thread |                | Piston rod with male thread |                  |
|                              |                | Part no.                      | Type           | Part no.                    | Type             |
| 12                           | 5              | 156500                        | ADVU-12-5-P-A  | 156586                      | ADVU-12-5-A-P-A  |
|                              | 10             | 156501                        | ADVU-12-10-P-A | 156587                      | ADVU-12-10-A-P-A |
|                              | 15             | 156502                        | ADVU-12-15-P-A | 156588                      | ADVU-12-15-A-P-A |
|                              | 20             | 156503                        | ADVU-12-20-P-A | 156589                      | ADVU-12-20-A-P-A |
|                              | 25             | 156504                        | ADVU-12-25-P-A | 156590                      | ADVU-12-25-A-P-A |
|                              | 30             | 156505                        | ADVU-12-30-P-A | 156591                      | ADVU-12-30-A-P-A |
|                              | 40             | 156506                        | ADVU-12-40-P-A | 156592                      | ADVU-12-40-A-P-A |
| 16                           | 5              | 156507                        | ADVU-16-5-P-A  | 156593                      | ADVU-16-5-A-P-A  |
|                              | 10             | 156508                        | ADVU-16-10-P-A | 156594                      | ADVU-16-10-A-P-A |
|                              | 15             | 156509                        | ADVU-16-15-P-A | 156595                      | ADVU-16-15-A-P-A |
|                              | 20             | 156510                        | ADVU-16-20-P-A | 156596                      | ADVU-16-20-A-P-A |
|                              | 25             | 156511                        | ADVU-16-25-P-A | 156597                      | ADVU-16-25-A-P-A |
|                              | 30             | 156512                        | ADVU-16-30-P-A | 156598                      | ADVU-16-30-A-P-A |
|                              | 40             | 156513                        | ADVU-16-40-P-A | 156599                      | ADVU-16-40-A-P-A |
| 20                           | 5              | 156514                        | ADVU-20-5-P-A  | 156600                      | ADVU-20-5-A-P-A  |
|                              | 10             | 156515                        | ADVU-20-10-P-A | 156601                      | ADVU-20-10-A-P-A |
|                              | 15             | 156516                        | ADVU-20-15-P-A | 156602                      | ADVU-20-15-A-P-A |
|                              | 20             | 156517                        | ADVU-20-20-P-A | 156603                      | ADVU-20-20-A-P-A |
|                              | 25             | 156518                        | ADVU-20-25-P-A | 156604                      | ADVU-20-25-A-P-A |
|                              | 30             | 156519                        | ADVU-20-30-P-A | 156605                      | ADVU-20-30-A-P-A |
|                              | 40             | 156520                        | ADVU-20-40-P-A | 156606                      | ADVU-20-40-A-P-A |
|                              | 50             | 156521                        | ADVU-20-50-P-A | 156607                      | ADVU-20-50-A-P-A |
| 25                           | 5              | 156522                        | ADVU-25-5-P-A  | 156608                      | ADVU-25-5-A-P-A  |
|                              | 10             | 156523                        | ADVU-25-10-P-A | 156609                      | ADVU-25-10-A-P-A |
|                              | 15             | 156524                        | ADVU-25-15-P-A | 156610                      | ADVU-25-15-A-P-A |
|                              | 20             | 156525                        | ADVU-25-20-P-A | 156611                      | ADVU-25-20-A-P-A |
|                              | 25             | 156526                        | ADVU-25-25-P-A | 156612                      | ADVU-25-25-A-P-A |
|                              | 30             | 156527                        | ADVU-25-30-P-A | 156613                      | ADVU-25-30-A-P-A |
|                              | 40             | 156528                        | ADVU-25-40-P-A | 156614                      | ADVU-25-40-A-P-A |
|                              | 50             | 156529                        | ADVU-25-50-P-A | 156615                      | ADVU-25-50-A-P-A |
| 32                           | 5              | 156530                        | ADVU-32-5-P-A  | 156616                      | ADVU-32-5-A-P-A  |
|                              | 10             | 156531                        | ADVU-32-10-P-A | 156617                      | ADVU-32-10-A-P-A |
|                              | 15             | 156532                        | ADVU-32-15-P-A | 156618                      | ADVU-32-15-A-P-A |
|                              | 20             | 156533                        | ADVU-32-20-P-A | 156619                      | ADVU-32-20-A-P-A |
|                              | 25             | 156534                        | ADVU-32-25-P-A | 156620                      | ADVU-32-25-A-P-A |
|                              | 30             | 156535                        | ADVU-32-30-P-A | 156621                      | ADVU-32-30-A-P-A |
|                              | 40             | 156536                        | ADVU-32-40-P-A | 156622                      | ADVU-32-40-A-P-A |
|                              | 50             | 156537                        | ADVU-32-50-P-A | 156623                      | ADVU-32-50-A-P-A |
|                              | 60             | 156538                        | ADVU-32-60-P-A | 156624                      | ADVU-32-60-A-P-A |
|                              | 80             | 156539                        | ADVU-32-80-P-A | 156625                      | ADVU-32-80-A-P-A |

## Datasheet – Double-acting, basic version

| Ordering data – Basic design |                |                               |                 |                             |                   |
|------------------------------|----------------|-------------------------------|-----------------|-----------------------------|-------------------|
| Piston Ø<br>[mm]             | Stroke<br>[mm] | Piston rod with female thread |                 | Piston rod with male thread |                   |
|                              |                | Part no.                      | Type            | Part no.                    | Type              |
| 40                           | 5              | 156540                        | ADVU-40-5-P-A   | 156626                      | ADVU-40-5-A-P-A   |
|                              | 10             | 156541                        | ADVU-40-10-P-A  | 156627                      | ADVU-40-10-A-P-A  |
|                              | 15             | 156542                        | ADVU-40-15-P-A  | 156628                      | ADVU-40-15-A-P-A  |
|                              | 20             | 156543                        | ADVU-40-20-P-A  | 156629                      | ADVU-40-20-A-P-A  |
|                              | 25             | 156544                        | ADVU-40-25-P-A  | 156630                      | ADVU-40-25-A-P-A  |
|                              | 30             | 156545                        | ADVU-40-30-P-A  | 156631                      | ADVU-40-30-A-P-A  |
|                              | 40             | 156546                        | ADVU-40-40-P-A  | 156632                      | ADVU-40-40-A-P-A  |
|                              | 50             | 156547                        | ADVU-40-50-P-A  | 156633                      | ADVU-40-50-A-P-A  |
|                              | 60             | 156548                        | ADVU-40-60-P-A  | 156634                      | ADVU-40-60-A-P-A  |
|                              | 80             | 156549                        | ADVU-40-80-P-A  | 156635                      | ADVU-40-80-A-P-A  |
| 50                           | 10             | 156550                        | ADVU-50-10-P-A  | 156636                      | ADVU-50-10-A-P-A  |
|                              | 15             | 156551                        | ADVU-50-15-P-A  | 156637                      | ADVU-50-15-A-P-A  |
|                              | 20             | 156552                        | ADVU-50-20-P-A  | 156638                      | ADVU-50-20-A-P-A  |
|                              | 25             | 156553                        | ADVU-50-25-P-A  | 156639                      | ADVU-50-25-A-P-A  |
|                              | 30             | 156554                        | ADVU-50-30-P-A  | 156640                      | ADVU-50-30-A-P-A  |
|                              | 40             | 156555                        | ADVU-50-40-P-A  | 156641                      | ADVU-50-40-A-P-A  |
|                              | 50             | 156556                        | ADVU-50-50-P-A  | 156642                      | ADVU-50-50-A-P-A  |
|                              | 60             | 156557                        | ADVU-50-60-P-A  | 156643                      | ADVU-50-60-A-P-A  |
|                              | 80             | 156558                        | ADVU-50-80-P-A  | 156644                      | ADVU-50-80-A-P-A  |
| 63                           | 10             | 156559                        | ADVU-63-10-P-A  | 156645                      | ADVU-63-10-A-P-A  |
|                              | 15             | 156560                        | ADVU-63-15-P-A  | 156646                      | ADVU-63-15-A-P-A  |
|                              | 20             | 156561                        | ADVU-63-20-P-A  | 156647                      | ADVU-63-20-A-P-A  |
|                              | 25             | 156562                        | ADVU-63-25-P-A  | 156648                      | ADVU-63-25-A-P-A  |
|                              | 30             | 156563                        | ADVU-63-30-P-A  | 156649                      | ADVU-63-30-A-P-A  |
|                              | 40             | 156564                        | ADVU-63-40-P-A  | 156650                      | ADVU-63-40-A-P-A  |
|                              | 50             | 156565                        | ADVU-63-50-P-A  | 156651                      | ADVU-63-50-A-P-A  |
|                              | 60             | 156566                        | ADVU-63-60-P-A  | 156652                      | ADVU-63-60-A-P-A  |
|                              | 80             | 156567                        | ADVU-63-80-P-A  | 156653                      | ADVU-63-80-A-P-A  |
| 80                           | 10             | 156568                        | ADVU-80-10-P-A  | 156654                      | ADVU-80-10-A-P-A  |
|                              | 15             | 156569                        | ADVU-80-15-P-A  | 156655                      | ADVU-80-15-A-P-A  |
|                              | 20             | 156570                        | ADVU-80-20-P-A  | 156656                      | ADVU-80-20-A-P-A  |
|                              | 25             | 156571                        | ADVU-80-25-P-A  | 156657                      | ADVU-80-25-A-P-A  |
|                              | 30             | 156572                        | ADVU-80-30-P-A  | 156658                      | ADVU-80-30-A-P-A  |
|                              | 40             | 156573                        | ADVU-80-40-P-A  | 156659                      | ADVU-80-40-A-P-A  |
|                              | 50             | 156574                        | ADVU-80-50-P-A  | 156660                      | ADVU-80-50-A-P-A  |
|                              | 60             | 156575                        | ADVU-80-60-P-A  | 156661                      | ADVU-80-60-A-P-A  |
|                              | 80             | 156576                        | ADVU-80-80-P-A  | 156662                      | ADVU-80-80-A-P-A  |
| 100                          | 10             | 156577                        | ADVU-100-10-P-A | 156663                      | ADVU-100-10-A-P-A |
|                              | 15             | 156578                        | ADVU-100-15-P-A | 156664                      | ADVU-100-15-A-P-A |
|                              | 20             | 156579                        | ADVU-100-20-P-A | 156665                      | ADVU-100-20-A-P-A |
|                              | 25             | 156580                        | ADVU-100-25-P-A | 156666                      | ADVU-100-25-A-P-A |
|                              | 30             | 156581                        | ADVU-100-30-P-A | 156667                      | ADVU-100-30-A-P-A |
|                              | 40             | 156582                        | ADVU-100-40-P-A | 156668                      | ADVU-100-40-A-P-A |
|                              | 50             | 156583                        | ADVU-100-50-P-A | 156669                      | ADVU-100-50-A-P-A |
|                              | 60             | 156584                        | ADVU-100-60-P-A | 156670                      | ADVU-100-60-A-P-A |
|                              | 80             | 156585                        | ADVU-100-80-P-A | 156671                      | ADVU-100-80-A-P-A |

## Datasheet – Double-acting, basic version

| Ordering data – Basic design |                |                               |                 |                             |                   |
|------------------------------|----------------|-------------------------------|-----------------|-----------------------------|-------------------|
| Piston Ø<br>[mm]             | Stroke<br>[mm] | Piston rod with female thread |                 | Piston rod with male thread |                   |
|                              |                | Part no.                      | Type            | Part no.                    | Type              |
| 125                          | 10             | 175750                        | ADVU-125-10-P-A | 175762                      | ADVU-125-10-A-P-A |
|                              | 15             | 175751                        | ADVU-125-15-P-A | 175763                      | ADVU-125-15-A-P-A |
|                              | 20             | 175752                        | ADVU-125-20-P-A | 175764                      | ADVU-125-20-A-P-A |
|                              | 25             | 175753                        | ADVU-125-25-P-A | 175765                      | ADVU-125-25-A-P-A |
|                              | 30             | 175754                        | ADVU-125-30-P-A | 175766                      | ADVU-125-30-A-P-A |
|                              | 40             | 175755                        | ADVU-125-40-P-A | 175767                      | ADVU-125-40-A-P-A |
|                              | 50             | 175756                        | ADVU-125-50-P-A | 175768                      | ADVU-125-50-A-P-A |
|                              | 60             | 175757                        | ADVU-125-60-P-A | 175769                      | ADVU-125-60-A-P-A |
|                              | 80             | 175758                        | ADVU-125-80-P-A | 175770                      | ADVU-125-80-A-P-A |

## Datasheet – Double-acting, basic version

| Ordering data – Variants         |           |                               |                     |                             |                       |
|----------------------------------|-----------|-------------------------------|---------------------|-----------------------------|-----------------------|
| Piston Ø                         | Stroke    | Piston rod with female thread |                     | Piston rod with male thread |                       |
| [mm]                             | [mm]      | Part no.                      | Type                | Part no.                    | Type                  |
| Variable stroke                  |           |                               |                     |                             |                       |
| 12                               | 1 ... 200 | 156000                        | ADVU-12-...-P-A     | 156040                      | ADVU-12-...-A-P-A     |
| 16                               | 1 ... 200 | 156001                        | ADVU-16-...-P-A     | 156041                      | ADVU-16-...-A-P-A     |
| 20                               | 1 ... 200 | 156002                        | ADVU-20-...-P-A     | 156042                      | ADVU-20-...-A-P-A     |
| 25                               | 1 ... 200 | 156003                        | ADVU-25-...-P-A     | 156043                      | ADVU-25-...-A-P-A     |
| 32                               | 1 ... 300 | 156004                        | ADVU-32-...-P-A     | 156044                      | ADVU-32-...-A-P-A     |
| 40                               | 1 ... 300 | 156005                        | ADVU-40-...-P-A     | 156045                      | ADVU-40-...-A-P-A     |
| 50                               | 1 ... 300 | 156006                        | ADVU-50-...-P-A     | 156046                      | ADVU-50-...-A-P-A     |
| 63                               | 1 ... 300 | 156007                        | ADVU-63-...-P-A     | 156047                      | ADVU-63-...-A-P-A     |
| 80                               | 1 ... 400 | 156008                        | ADVU-80-...-P-A     | 156048                      | ADVU-80-...-A-P-A     |
| 100                              | 1 ... 400 | 156009                        | ADVU-100-...-P-A    | 156049                      | ADVU-100-...-A-P-A    |
| 125                              | 1 ... 400 | 175759                        | ADVU-125-...-P-A    | 175771                      | ADVU-125-...-A-P-A    |
| S2 – Through piston rod          |           |                               |                     |                             |                       |
| 12                               | 1 ... 200 | 156010                        | ADVU-12-...-P-A-S2  | 156050                      | ADVU-12-...-A-P-A-S2  |
| 16                               | 1 ... 200 | 156011                        | ADVU-16-...-P-A-S2  | 156051                      | ADVU-16-...-A-P-A-S2  |
| 20                               | 1 ... 200 | 156012                        | ADVU-20-...-P-A-S2  | 156052                      | ADVU-20-...-A-P-A-S2  |
| 25                               | 1 ... 200 | 156013                        | ADVU-25-...-P-A-S2  | 156053                      | ADVU-25-...-A-P-A-S2  |
| 32                               | 1 ... 300 | 156014                        | ADVU-32-...-P-A-S2  | 156054                      | ADVU-32-...-A-P-A-S2  |
| 40                               | 1 ... 300 | 156015                        | ADVU-40-...-P-A-S2  | 156055                      | ADVU-40-...-A-P-A-S2  |
| 50                               | 1 ... 300 | 156016                        | ADVU-50-...-P-A-S2  | 156056                      | ADVU-50-...-A-P-A-S2  |
| 63                               | 1 ... 300 | 156017                        | ADVU-63-...-P-A-S2  | 156057                      | ADVU-63-...-A-P-A-S2  |
| 80                               | 1 ... 400 | 156018                        | ADVU-80-...-P-A-S2  | 156058                      | ADVU-80-...-A-P-A-S2  |
| 100                              | 1 ... 400 | 156019                        | ADVU-100-...-P-A-S2 | 156059                      | ADVU-100-...-A-P-A-S2 |
| 125                              | 1 ... 400 | 175760                        | ADVU-125-...-P-A-S2 | 175772                      | ADVU-125-...-A-P-A-S2 |
| S6 – Heat-resistant up to 120 °C |           |                               |                     |                             |                       |
| 12                               | 1 ... 200 | 156030                        | ADVU-12-...-P-A-S6  | 156090                      | ADVU-12-...-A-P-A-S6  |
| 16                               | 1 ... 200 | 156031                        | ADVU-16-...-P-A-S6  | 156091                      | ADVU-16-...-A-P-A-S6  |
| 20                               | 1 ... 200 | 156032                        | ADVU-20-...-P-A-S6  | 156092                      | ADVU-20-...-A-P-A-S6  |
| 25                               | 1 ... 200 | 156033                        | ADVU-25-...-P-A-S6  | 156093                      | ADVU-25-...-A-P-A-S6  |
| 32                               | 1 ... 300 | 156034                        | ADVU-32-...-P-A-S6  | 156094                      | ADVU-32-...-A-P-A-S6  |
| 40                               | 1 ... 300 | 156035                        | ADVU-40-...-P-A-S6  | 156095                      | ADVU-40-...-A-P-A-S6  |
| 50                               | 1 ... 300 | 156036                        | ADVU-50-...-P-A-S6  | 156096                      | ADVU-50-...-A-P-A-S6  |
| 63                               | 1 ... 300 | 156037                        | ADVU-63-...-P-A-S6  | 156097                      | ADVU-63-...-A-P-A-S6  |
| 80                               | 1 ... 400 | 156038                        | ADVU-80-...-P-A-S6  | 156098                      | ADVU-80-...-A-P-A-S6  |
| 100                              | 1 ... 400 | 156039                        | ADVU-100-...-P-A-S6 | 156099                      | ADVU-100-...-A-P-A-S6 |
| 125                              | 1 ... 400 | 175761                        | ADVU-125-...-P-A-S6 | 175773                      | ADVU-125-...-A-P-A-S6 |

## Datasheet – Double-acting, basic version

| Ordering data – Variants            |                |                               |                     |                             |                        |
|-------------------------------------|----------------|-------------------------------|---------------------|-----------------------------|------------------------|
| Piston ø<br>[mm]                    | Stroke<br>[mm] | Piston rod with female thread |                     | Piston rod with male thread |                        |
|                                     |                | Part no.                      | Type                | Part no.                    | Type                   |
| S20 – Through, hollow piston rod    |                |                               |                     |                             |                        |
| 12                                  | 1 ... 200      | –                             |                     | 156060                      | ADVU-12-...-A-P-A-S20  |
| 16                                  | 1 ... 200      |                               |                     | 156061                      | ADVU-16-...-A-P-A-S20  |
| 20                                  | 1 ... 200      |                               |                     | 156062                      | ADVU-20-...-A-P-A-S20  |
| 25                                  | 1 ... 200      |                               |                     | 156063                      | ADVU-25-...-A-P-A-S20  |
| 32                                  | 1 ... 300      |                               |                     | 156064                      | ADVU-32-...-A-P-A-S20  |
| 40                                  | 1 ... 300      |                               |                     | 156065                      | ADVU-40-...-A-P-A-S20  |
| 50                                  | 1 ... 300      |                               |                     | 156066                      | ADVU-50-...-A-P-A-S20  |
| 63                                  | 1 ... 300      |                               |                     | 156067                      | ADVU-63-...-A-P-A-S20  |
| 80                                  | 1 ... 400      |                               |                     | 156068                      | ADVU-80-...-A-P-A-S20  |
| 100                                 | 1 ... 400      |                               |                     | 156069                      | ADVU-100-...-A-P-A-S20 |
| R3 – Increased corrosion protection |                |                               |                     |                             |                        |
| 12                                  | 1 ... 200      | 176840                        | ADVU-12-...-P-A-R3  | 176851                      | ADVU-12-...-A-P-A-R3   |
| 16                                  | 1 ... 200      | 176841                        | ADVU-16-...-P-A-R3  | 176852                      | ADVU-16-...-A-P-A-R3   |
| 20                                  | 1 ... 200      | 176842                        | ADVU-20-...-P-A-R3  | 176853                      | ADVU-20-...-A-P-A-R3   |
| 25                                  | 1 ... 200      | 176843                        | ADVU-25-...-P-A-R3  | 176854                      | ADVU-25-...-A-P-A-R3   |
| 32                                  | 1 ... 300      | 176844                        | ADVU-32-...-P-A-R3  | 176855                      | ADVU-32-...-A-P-A-R3   |
| 40                                  | 1 ... 300      | 176845                        | ADVU-40-...-P-A-R3  | 176856                      | ADVU-40-...-A-P-A-R3   |
| 50                                  | 1 ... 300      | 176846                        | ADVU-50-...-P-A-R3  | 176857                      | ADVU-50-...-A-P-A-R3   |
| 63                                  | 1 ... 300      | 176847                        | ADVU-63-...-P-A-R3  | 176858                      | ADVU-63-...-A-P-A-R3   |
| 80                                  | 1 ... 400      | 176848                        | ADVU-80-...-P-A-R3  | 176859                      | ADVU-80-...-A-P-A-R3   |
| 100                                 | 1 ... 400      | 176849                        | ADVU-100-...-P-A-R3 | 176860                      | ADVU-100-...-A-P-A-R3  |
| 125                                 | 1 ... 400      | 176850                        | ADVU-125-...-P-A-R3 | 176861                      | ADVU-125-...-A-P-A-R3  |

## Datasheet – Double-acting, basic version

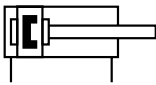
| Ordering data – Sets of wearing parts |                      |                                    |                                         |                                       |
|---------------------------------------|----------------------|------------------------------------|-----------------------------------------|---------------------------------------|
|                                       | Part no.             | Type                               | Part no.                                | Type                                  |
| <b>Piston Ø</b>                       | <b>Basic version</b> |                                    | <b>S6 – Heat-resistant up to 120 °C</b> |                                       |
| 32                                    | 121119               | ADVU-32-...-(A)-P-A <sup>1)</sup>  | 383563                                  | ADVU-32-...-(A)-P-A-S6 <sup>1)</sup>  |
| 40                                    | 121120               | ADVU-40-...-(A)-P-A <sup>1)</sup>  | 383564                                  | ADVU-40-...-(A)-P-A-S6 <sup>1)</sup>  |
| 50                                    | 121121               | ADVU-50-...-(A)-P-A <sup>1)</sup>  | 383565                                  | ADVU-50-...-(A)-P-A-S6 <sup>1)</sup>  |
| 63                                    | 121122               | ADVU-63-...-(A)-P-A <sup>1)</sup>  | 383566                                  | ADVU-63-...-(A)-P-A-S6 <sup>1)</sup>  |
| 80                                    | 121123               | ADVU-80-...-(A)-P-A <sup>1)</sup>  | 383567                                  | ADVU-80-...-(A)-P-A-S6 <sup>1)</sup>  |
| 100                                   | 121124               | ADVU-100-...-(A)-P-A <sup>1)</sup> | 383568                                  | ADVU-100-...-(A)-P-A-S6 <sup>1)</sup> |
| 125                                   | 380423               | ADVU-125-...-(A)-P-A <sup>1)</sup> | 383569                                  | ADVU-125-...-(A)-P-A-S6 <sup>1)</sup> |

1) Assembly grease included in the scope of delivery

2) Assembly grease not included in scope of delivery. If required, please order separately using part no. 329 555 (20 ml)

Datasheet – Double-acting, protected against rotation with square piston rod

Function

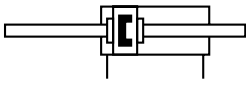


- - Diameter  
12 ... 100 mm

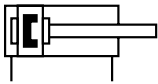
- - Stroke length  
1 ... 400 mm

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

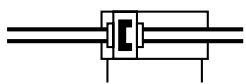
Variants



S2



S6



S20



ADVULQ-...-P-A



ADVULQ-...-P-A-S2

| General technical data                 |               |                                                                |    |          |    |      |      |          |      |         |         |
|----------------------------------------|---------------|----------------------------------------------------------------|----|----------|----|------|------|----------|------|---------|---------|
| Piston Ø                               |               | 12                                                             | 16 | 20       | 25 | 32   | 40   | 50       | 63   | 80      | 100     |
| Pneumatic connection                   |               | M5                                                             | M5 | M5       | M5 | G1/8 | G1/8 | G1/8     | G1/8 | G1/8    | G1/4    |
| Piston rod end                         | Female thread | M3                                                             | M4 | M5       | M5 | M6   | M6   | M8       | M8   | M10     | M12     |
|                                        | Male thread   | M6                                                             | M8 | M10x1.25 |    |      |      | M12x1.25 |      | M16x1.5 | M20x1.5 |
| Operating medium                       |               | Compressed air to ISO 8573-1:2010 [7:4:4]                      |    |          |    |      |      |          |      |         |         |
| Note on the operating/<br>pilot medium |               | Lubricated operation possible (required for further operation) |    |          |    |      |      |          |      |         |         |
| Design                                 |               | Piston                                                         |    |          |    |      |      |          |      |         |         |
|                                        |               | Piston rod                                                     |    |          |    |      |      |          |      |         |         |
| Cushioning                             |               | Elastic cushioning rings/plates at both ends                   |    |          |    |      |      |          |      |         |         |
| Position sensing                       |               | Via proximity switch                                           |    |          |    |      |      |          |      |         |         |
| Type of mounting                       |               | With through-hole                                              |    |          |    |      |      |          |      |         |         |
|                                        |               | With female thread                                             |    |          |    |      |      |          |      |         |         |
|                                        |               | Via accessories                                                |    |          |    |      |      |          |      |         |         |
| Mounting position                      |               | Any                                                            |    |          |    |      |      |          |      |         |         |

- - **Note**

This product conforms to ISO 1179-1  
and ISO 228-1

| Operating pressure      |       |              |    |              |              |    |    |    |              |    |     |
|-------------------------|-------|--------------|----|--------------|--------------|----|----|----|--------------|----|-----|
| Piston Ø                |       | 12           | 16 | 20           | 25           | 32 | 40 | 50 | 63           | 80 | 100 |
| Piston rod at one end   | [MPa] | 0.15 ... 0.1 |    | 0.1 ... 0.1  |              |    |    |    |              |    |     |
|                         | [bar] | 1.5 ... 10   |    | 1 ... 10     |              |    |    |    |              |    |     |
|                         | [psi] | 21.8 ... 145 |    | 14.5 ... 145 |              |    |    |    |              |    |     |
| Through piston rod S2   | [MPa] | 0.15 ... 0.1 |    |              | 0.12 ... 0.1 |    |    |    | 0.1 ... 0.1  |    |     |
|                         | [bar] | 1.5 ... 10   |    |              | 1.2 ... 10   |    |    |    | 1 ... 10     |    |     |
|                         | [psi] | 21.8 ... 145 |    |              | 17.4 ... 145 |    |    |    | 14.5 ... 145 |    |     |
| Heat-resistant seals S6 | [MPa] | 0.15 ... 0.6 |    | 0.1 ... 0.6  |              |    |    |    |              |    |     |
|                         | [bar] | 1.5 ... 6    |    | 1 ... 6      |              |    |    |    |              |    |     |
|                         | [psi] | 21.8 ... 87  |    | 14.5 ... 87  |              |    |    |    |              |    |     |

# Datasheet – Double-acting, protected against rotation with square piston rod

| Environmental conditions                     |               |            |
|----------------------------------------------|---------------|------------|
| Compact cylinder                             | Basic version | S6         |
| Ambient temperature <sup>1)</sup> [°C]       | –20 ... +80   | 0 ... +120 |
| Corrosion resistance class CRC <sup>2)</sup> | 2             | 2          |

1) Note operating range of proximity switches

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

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

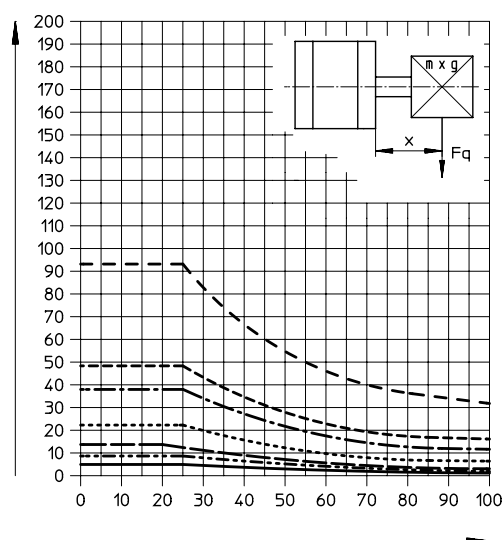
| Forces [N] and impact energy [J]                         |      |      |      |      |      |      |      |      |      |      |
|----------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Piston Ø                                                 | 12   | 16   | 20   | 25   | 32   | 40   | 50   | 63   | 80   | 100  |
| Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing  | 68   | 121  | 188  | 295  | 483  | 754  | 1178 | 1870 | 3016 | 4712 |
| S2/S20                                                   | 51   | 90   | 141  | 247  | 415  | 686  | 1057 | 1750 | 2827 | 4418 |
| Theoretical force at 0.6 MPa (6 bar, 87 psi), retracting | 51   | 90   | 141  | 247  | 415  | 686  | 1057 | 1750 | 2827 | 4418 |
| S2/S20                                                   | 51   | 90   | 141  | 247  | 415  | 686  | 1057 | 1750 | 2827 | 4418 |
| Max. impact energy in the end positions                  | 0.07 | 0.10 | 0.14 | 0.30 | 0.40 | 0.52 | 0.64 | 0.70 | 0.75 | 1.00 |
| S20                                                      | 0.01 | 0.01 | 0.01 | 0.01 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.10 |

| Technical data – Square piston rod               |      |      |      |      |      |      |      |      |      |      |
|--------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Piston Ø                                         | 12   | 16   | 20   | 25   | 32   | 40   | 50   | 63   | 80   | 100  |
| Max. torque on the piston rod <sup>1)</sup> [Nm] | 0.10 | 0.20 | 0.45 | 0.45 | 0.80 | 0.80 | 1.10 | 1.10 | 1.50 | 3.00 |
| Max. torsional backlash of the piston rod [°]    | ±1.0 | ±0.9 | ±0.8 | ±0.8 | ±0.6 | ±0.6 | ±0.5 | ±0.5 | ±0.4 | ±0.4 |
| Piston rod distortion [°/50 mm]                  | 0.40 | 0.30 | 0.25 | 0.25 | 0.20 | 0.20 | 0.15 | 0.15 | 0.15 | 0.09 |

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

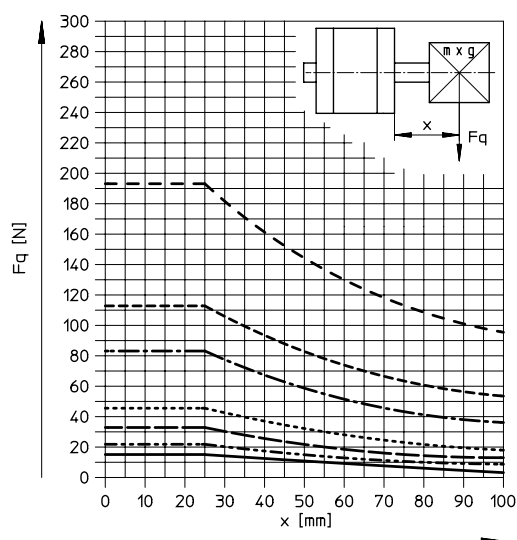
## Max. lateral force $F_q$ as a function of projection $x$

Piston rod at one end



———— Ø 12  
 ..... Ø 16  
 - - - - - Ø 20/25  
 ..... Ø 32/40  
 - · - · - · Ø 50/63  
 - - - - - Ø 80  
 - - - - - Ø 100

Through piston rod

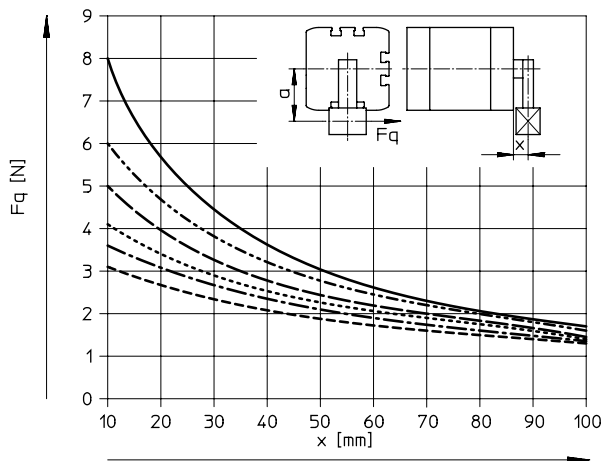


———— Ø 12  
 ..... Ø 16  
 - - - - - Ø 20/25  
 ..... Ø 32/40  
 - · - · - · Ø 50/63  
 - - - - - Ø 80  
 - - - - - Ø 100

Datasheet – Double-acting, protected against rotation with square piston rod

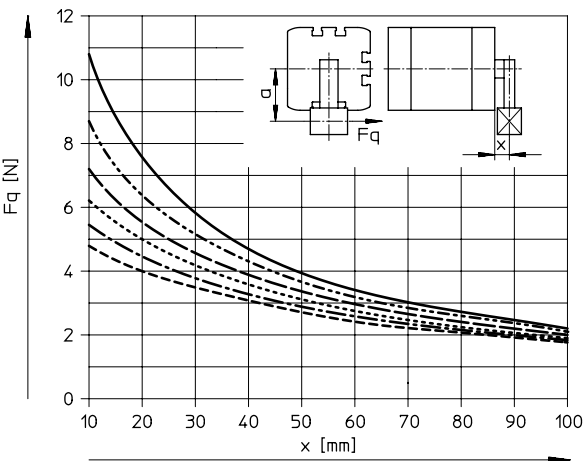
Max. lateral load  $F_q$  as a function of projection  $x$  and lever arm  $a$

Q – Square piston rod  
 $\varnothing 12$



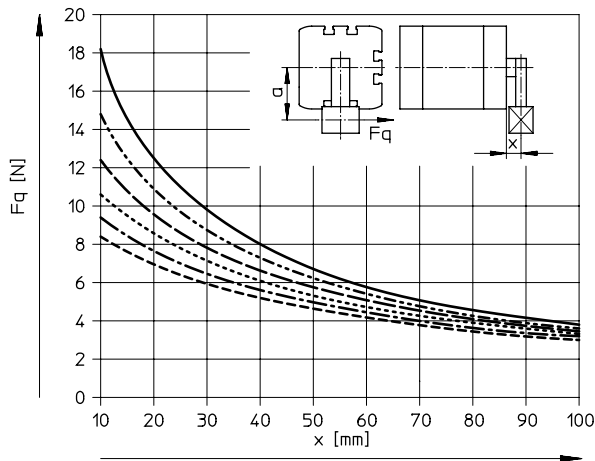
- $a = 5 \text{ mm}$
- · - ·  $a = 10 \text{ mm}$
- - -  $a = 15 \text{ mm}$
- · ·  $a = 20 \text{ mm}$
- · - ·  $a = 25 \text{ mm}$
- - -  $a = 30 \text{ mm}$

Through piston rod  
 $\varnothing 16$



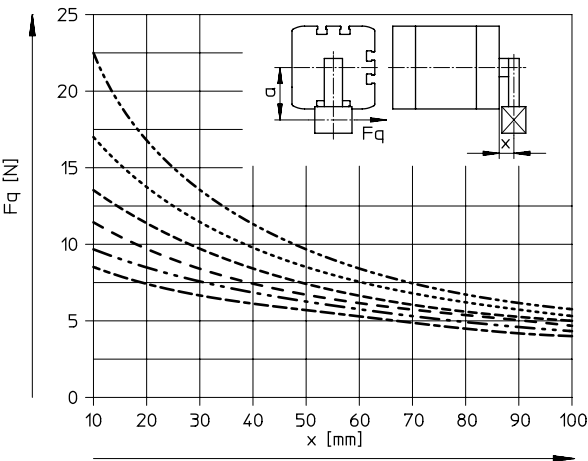
- $a = 5 \text{ mm}$
- · - ·  $a = 10 \text{ mm}$
- - -  $a = 15 \text{ mm}$
- · ·  $a = 20 \text{ mm}$
- · - ·  $a = 25 \text{ mm}$
- - -  $a = 30 \text{ mm}$

$\varnothing 20/25$



- $a = 5 \text{ mm}$
- · - ·  $a = 10 \text{ mm}$
- - -  $a = 15 \text{ mm}$
- · ·  $a = 20 \text{ mm}$
- · - ·  $a = 25 \text{ mm}$
- - -  $a = 30 \text{ mm}$

$\varnothing 32/40$



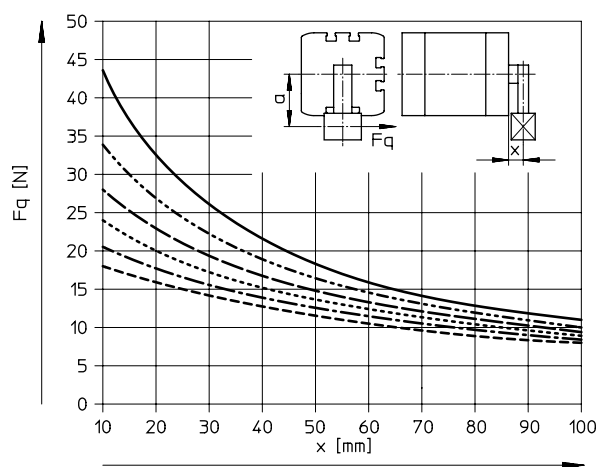
- · - ·  $a = 10 \text{ mm}$
- · ·  $a = 20 \text{ mm}$
- - -  $a = 30 \text{ mm}$
- - -  $a = 40 \text{ mm}$
- · - ·  $a = 50 \text{ mm}$
- · - ·  $a = 60 \text{ mm}$

# Datasheet – Double-acting, protected against rotation with square piston rod

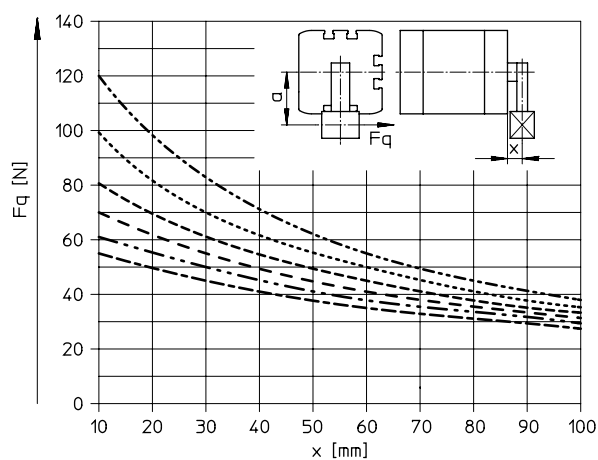
Max. lateral load  $F_q$  as a function of projection  $x$  and lever arm  $a$

Ø 50/63

Ø 80/100



—  $a = 10$  mm  
 - - -  $a = 20$  mm  
 - - -  $a = 30$  mm  
 .....  $a = 40$  mm  
 - · -  $a = 50$  mm  
 - - -  $a = 60$  mm



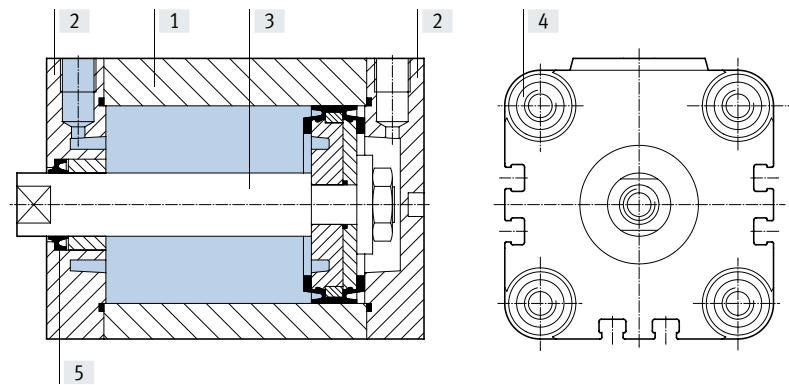
- · -  $a = 10$  mm  
 .....  $a = 20$  mm  
 - - -  $a = 30$  mm  
 - - -  $a = 40$  mm  
 - · -  $a = 50$  mm  
 - - -  $a = 60$  mm

| Weight [g]                         |    |    |     |     |     |     |     |      |      |      |
|------------------------------------|----|----|-----|-----|-----|-----|-----|------|------|------|
| Piston Ø                           | 12 | 16 | 20  | 25  | 32  | 40  | 50  | 63   | 80   | 100  |
| Product weight with 0 mm stroke    | 87 | 89 | 149 | 180 | 300 | 433 | 560 | 1059 | 1772 | 2797 |
| Additional weight per 10 mm stroke | 15 | 15 | 23  | 28  | 40  | 59  | 72  | 107  | 168  | 177  |
| Moving mass with 0 mm stroke       | 8  | 12 | 20  | 26  | 49  | 63  | 112 | 134  | 307  | 614  |
| Additional mass per 10 mm stroke   | 2  | 4  | 6   | 6   | 9   | 9   | 16  | 16   | 25   | 38   |

Datasheet – Double-acting, protected against rotation with square piston rod

Materials

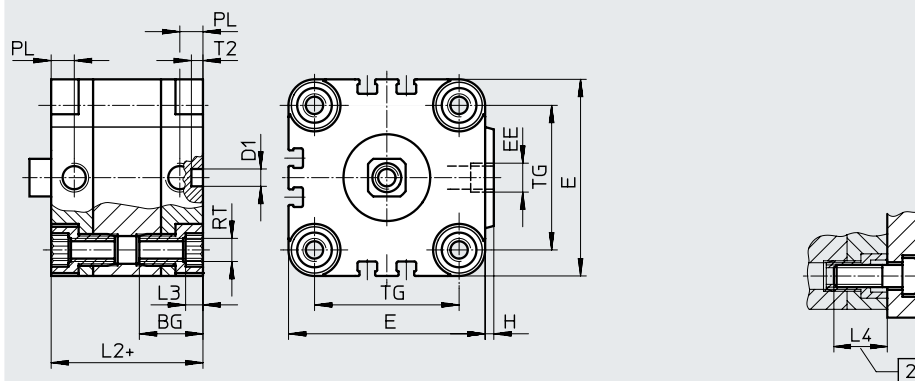
Sectional view



| Compact cylinder |                 | Basic version              | S6                         |
|------------------|-----------------|----------------------------|----------------------------|
| [1]              | Cylinder barrel | Wrought aluminium alloy    | Wrought aluminium alloy    |
| [2]              | Cover           | Wrought aluminium alloy    | Wrought aluminium alloy    |
| [3]              | Piston rod      | High-alloy stainless steel | High-alloy stainless steel |
|                  |                 | High-alloy steel           | High-alloy steel           |
| [4]              | Flange screws   | High-alloy stainless steel | High-alloy stainless steel |
|                  |                 | Galvanised steel           | Galvanised steel           |
| [5]              | Dynamic seals   | Polyurethane               | Fluoro rubber              |

## Datasheet – Double-acting, protected against rotation with square piston rod

## Dimensions – Basic cylinder

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

-  - **Note**

To mount from above with piston diameter 12 and 16 mm, only use 2 diagonal screws or use non-magnetic screws.

+ = plus stroke length

[2] Minimum screw-in depth

| ∅<br>[mm] | BG   | D1<br>∅<br>H9 | E   | EE   | H   | L2   | L3 | L4 | PL   | RT  | T2<br>±0.2 | TG  |
|-----------|------|---------------|-----|------|-----|------|----|----|------|-----|------------|-----|
| 12        | 18.5 | 6             | 29  | M5   | 1   | 38   | 3  | 16 | 8    | M4  | 4          | 18  |
| 16        | 18.5 | 6             | 29  | M5   | 1   | 38   | 3  | 16 | 8    | M4  | 4          | 18  |
| 20        | 18.5 | 6             | 36  | M5   | 1.5 | 38   | 4  | 18 | 8    | M5  | 4          | 22  |
| 25        | 18.5 | 6             | 40  | M5   | 1.5 | 39.5 | 4  | 18 | 8    | M5  | 4          | 26  |
| 32        | 21.5 | 6             | 50  | G1/8 | 2   | 44.5 | 5  | 20 | 8    | M6  | 4          | 32  |
| 40        | 21.5 | 6             | 60  | G1/8 | 2.5 | 45.5 | 5  | 20 | 8    | M6  | 4          | 42  |
| 50        | 22   | 6             | 68  | G1/8 | 3   | 45.5 | 6  | 20 | 8    | M8  | 4          | 50  |
| 63        | 24.5 | 8             | 87  | G1/8 | 4   | 50   | 8  | 25 | 8    | M10 | 4          | 62  |
| 80        | 27.5 | 8             | 107 | G1/8 | 4   | 56   | 8  | 25 | 8.5  | M10 | 4          | 82  |
| 100       | 32.5 | 8             | 128 | G1/4 | 5   | 66.5 | 8  | 25 | 10.5 | M10 | 4          | 103 |

-  - **Note**

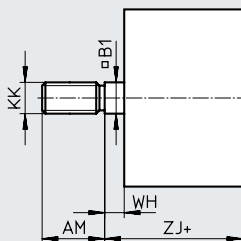
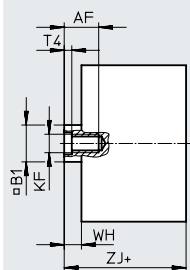
This product conforms to ISO 1179-1 and ISO 228-1

## Datasheet – Double-acting, protected against rotation with square piston rod

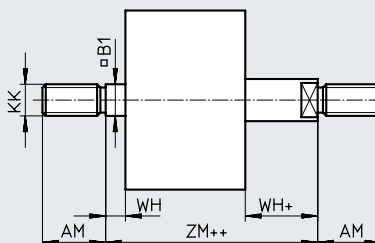
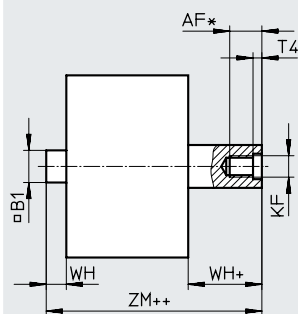
## Dimensions – Variants

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

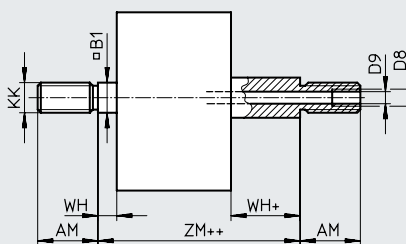
## Basic version



## S2 – Through piston rod



## S20 – Through, hollow piston rod



+ = plus stroke length

++ = plus 2x stroke length

| Ø<br>[mm]         | AF               | AM | B1<br>□ | D8   | D9<br>Ø | KF  | KK       | T4  | WH  | ZJ   | ZM   |
|-------------------|------------------|----|---------|------|---------|-----|----------|-----|-----|------|------|
| 12                | 8                | 16 | 5.5     | –    | 2.3     | M3  | M6       | 1.5 | 4.5 | 42.5 | 47   |
| 16                | 10               | 20 | 7       | –    | 3.2     | M4  | M8       | 1.5 | 4.5 | 42.5 | 47   |
| 20 <sup>2)</sup>  | 12               | 22 | 9       | –    | 3.8     | M5  | M10x1.25 | 2   | 4.5 | 42.5 | 47   |
| 25 <sup>2)</sup>  | 12               | 22 | 9       | –    | 3.8     | M5  | M10x1.25 | 2   | 5.5 | 45   | 50.5 |
| 32 <sup>2)</sup>  | 14               | 22 | 10      | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6   | 50.5 | 56.5 |
| 40 <sup>2)</sup>  | 14               | 22 | 10      | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6.5 | 52   | 58.5 |
| 50 <sup>2)</sup>  | 16               | 24 | 12      | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 53   | 60.5 |
| 63 <sup>2)</sup>  | 16               | 24 | 12      | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 57.5 | 65   |
| 80 <sup>2)</sup>  | 20 <sup>1)</sup> | 32 | 16      | G1/8 | 8       | M10 | M16x1.5  | 4.7 | 8   | 64   | 72   |
| 100 <sup>2)</sup> | 24 <sup>1)</sup> | 40 | 20      | G1/4 | 11.7    | M12 | M20x1.5  | 6.1 | 10  | 76.5 | 86.5 |

1) With a stroke &lt; 5 mm, the maximum screw-in depth is reduced by 5 mm

2) Nut for piston rod thread included in the scope of delivery

## Datasheet – Double-acting, protected against rotation with square piston rod

| Ordering data – Basic design |                |                               |                  |                             |                    |
|------------------------------|----------------|-------------------------------|------------------|-----------------------------|--------------------|
| Piston Ø<br>[mm]             | Stroke<br>[mm] | Piston rod with female thread |                  | Piston rod with male thread |                    |
|                              |                | Part no.                      | Type             | Part no.                    | Type               |
| 12                           | 5              | 156672                        | ADVULQ-12-5-P-A  | 156758                      | ADVULQ-12-5-A-P-A  |
|                              | 10             | 156673                        | ADVULQ-12-10-P-A | 156759                      | ADVULQ-12-10-A-P-A |
|                              | 15             | 156674                        | ADVULQ-12-15-P-A | 156760                      | ADVULQ-12-15-A-P-A |
|                              | 20             | 156675                        | ADVULQ-12-20-P-A | 156761                      | ADVULQ-12-20-A-P-A |
|                              | 25             | 156676                        | ADVULQ-12-25-P-A | 156762                      | ADVULQ-12-25-A-P-A |
|                              | 30             | 156677                        | ADVULQ-12-30-P-A | 156763                      | ADVULQ-12-30-A-P-A |
|                              | 40             | 156678                        | ADVULQ-12-40-P-A | 156764                      | ADVULQ-12-40-A-P-A |
| 16                           | 5              | 156679                        | ADVULQ-16-5-P-A  | 156765                      | ADVULQ-16-5-A-P-A  |
|                              | 10             | 156680                        | ADVULQ-16-10-P-A | 156766                      | ADVULQ-16-10-A-P-A |
|                              | 15             | 156681                        | ADVULQ-16-15-P-A | 156767                      | ADVULQ-16-15-A-P-A |
|                              | 20             | 156682                        | ADVULQ-16-20-P-A | 156768                      | ADVULQ-16-20-A-P-A |
|                              | 25             | 156683                        | ADVULQ-16-25-P-A | 156769                      | ADVULQ-16-25-A-P-A |
|                              | 30             | 156684                        | ADVULQ-16-30-P-A | 156770                      | ADVULQ-16-30-A-P-A |
|                              | 40             | 156685                        | ADVULQ-16-40-P-A | 156771                      | ADVULQ-16-40-A-P-A |
| 20                           | 5              | 156686                        | ADVULQ-20-5-P-A  | 156772                      | ADVULQ-20-5-A-P-A  |
|                              | 10             | 156687                        | ADVULQ-20-10-P-A | 156773                      | ADVULQ-20-10-A-P-A |
|                              | 15             | 156688                        | ADVULQ-20-15-P-A | 156774                      | ADVULQ-20-15-A-P-A |
|                              | 20             | 156689                        | ADVULQ-20-20-P-A | 156775                      | ADVULQ-20-20-A-P-A |
|                              | 25             | 156690                        | ADVULQ-20-25-P-A | 156776                      | ADVULQ-20-25-A-P-A |
|                              | 30             | 156691                        | ADVULQ-20-30-P-A | 156777                      | ADVULQ-20-30-A-P-A |
|                              | 40             | 156692                        | ADVULQ-20-40-P-A | 156778                      | ADVULQ-20-40-A-P-A |
|                              | 50             | 156693                        | ADVULQ-20-50-P-A | 156779                      | ADVULQ-20-50-A-P-A |
| 25                           | 5              | 156694                        | ADVULQ-25-5-P-A  | 156780                      | ADVULQ-25-5-A-P-A  |
|                              | 10             | 156695                        | ADVULQ-25-10-P-A | 156781                      | ADVULQ-25-10-A-P-A |
|                              | 15             | 156696                        | ADVULQ-25-15-P-A | 156782                      | ADVULQ-25-15-A-P-A |
|                              | 20             | 156697                        | ADVULQ-25-20-P-A | 156783                      | ADVULQ-25-20-A-P-A |
|                              | 25             | 156698                        | ADVULQ-25-25-P-A | 156784                      | ADVULQ-25-25-A-P-A |
|                              | 30             | 156699                        | ADVULQ-25-30-P-A | 156785                      | ADVULQ-25-30-A-P-A |
|                              | 40             | 156700                        | ADVULQ-25-40-P-A | 156786                      | ADVULQ-25-40-A-P-A |
|                              | 50             | 156701                        | ADVULQ-25-50-P-A | 156787                      | ADVULQ-25-50-A-P-A |
| 32                           | 5              | 156702                        | ADVULQ-32-5-P-A  | 156788                      | ADVULQ-32-5-A-P-A  |
|                              | 10             | 156703                        | ADVULQ-32-10-P-A | 156789                      | ADVULQ-32-10-A-P-A |
|                              | 15             | 156704                        | ADVULQ-32-15-P-A | 156790                      | ADVULQ-32-15-A-P-A |
|                              | 20             | 156705                        | ADVULQ-32-20-P-A | 156791                      | ADVULQ-32-20-A-P-A |
|                              | 25             | 156706                        | ADVULQ-32-25-P-A | 156792                      | ADVULQ-32-25-A-P-A |
|                              | 30             | 156707                        | ADVULQ-32-30-P-A | 156793                      | ADVULQ-32-30-A-P-A |
|                              | 40             | 156708                        | ADVULQ-32-40-P-A | 156794                      | ADVULQ-32-40-A-P-A |
|                              | 50             | 156709                        | ADVULQ-32-50-P-A | 156795                      | ADVULQ-32-50-A-P-A |
|                              | 60             | 156710                        | ADVULQ-32-60-P-A | 156796                      | ADVULQ-32-60-A-P-A |
|                              | 80             | 156711                        | ADVULQ-32-80-P-A | 156797                      | ADVULQ-32-80-A-P-A |

## Datasheet – Double-acting, protected against rotation with square piston rod

| Ordering data – Basic design |                |                               |                   |                             |                     |
|------------------------------|----------------|-------------------------------|-------------------|-----------------------------|---------------------|
| Piston Ø<br>[mm]             | Stroke<br>[mm] | Piston rod with female thread |                   | Piston rod with male thread |                     |
|                              |                | Part no.                      | Type              | Part no.                    | Type                |
| 40                           | 5              | 156712                        | ADVULQ-40-5-P-A   | 156798                      | ADVULQ-40-5-A-P-A   |
|                              | 10             | 156713                        | ADVULQ-40-10-P-A  | 156799                      | ADVULQ-40-10-A-P-A  |
|                              | 15             | 156714                        | ADVULQ-40-15-P-A  | 156800                      | ADVULQ-40-15-A-P-A  |
|                              | 20             | 156715                        | ADVULQ-40-20-P-A  | 156801                      | ADVULQ-40-20-A-P-A  |
|                              | 25             | 156716                        | ADVULQ-40-25-P-A  | 156802                      | ADVULQ-40-25-A-P-A  |
|                              | 30             | 156717                        | ADVULQ-40-30-P-A  | 156803                      | ADVULQ-40-30-A-P-A  |
|                              | 40             | 156718                        | ADVULQ-40-40-P-A  | 156804                      | ADVULQ-40-40-A-P-A  |
|                              | 50             | 156719                        | ADVULQ-40-50-P-A  | 156805                      | ADVULQ-40-50-A-P-A  |
|                              | 60             | 156720                        | ADVULQ-40-60-P-A  | 156806                      | ADVULQ-40-60-A-P-A  |
|                              | 80             | 156721                        | ADVULQ-40-80-P-A  | 156807                      | ADVULQ-40-80-A-P-A  |
| 50                           | 10             | 156722                        | ADVULQ-50-10-P-A  | 156808                      | ADVULQ-50-10-A-P-A  |
|                              | 15             | 156723                        | ADVULQ-50-15-P-A  | 156809                      | ADVULQ-50-15-A-P-A  |
|                              | 20             | 156724                        | ADVULQ-50-20-P-A  | 156810                      | ADVULQ-50-20-A-P-A  |
|                              | 25             | 156725                        | ADVULQ-50-25-P-A  | 156811                      | ADVULQ-50-25-A-P-A  |
|                              | 30             | 156726                        | ADVULQ-50-30-P-A  | 156812                      | ADVULQ-50-30-A-P-A  |
|                              | 40             | 156727                        | ADVULQ-50-40-P-A  | 156813                      | ADVULQ-50-40-A-P-A  |
|                              | 50             | 156728                        | ADVULQ-50-50-P-A  | 156814                      | ADVULQ-50-50-A-P-A  |
|                              | 60             | 156729                        | ADVULQ-50-60-P-A  | 156815                      | ADVULQ-50-60-A-P-A  |
|                              | 80             | 156730                        | ADVULQ-50-80-P-A  | 156816                      | ADVULQ-50-80-A-P-A  |
| 63                           | 10             | 156731                        | ADVULQ-63-10-P-A  | 156 817                     | ADVULQ-63-10-A-P-A  |
|                              | 15             | 156732                        | ADVULQ-63-15-P-A  | 156 818                     | ADVULQ-63-15-A-P-A  |
|                              | 20             | 156733                        | ADVULQ-63-20-P-A  | 156 819                     | ADVULQ-63-20-A-P-A  |
|                              | 25             | 156734                        | ADVULQ-63-25-P-A  | 156 820                     | ADVULQ-63-25-A-P-A  |
|                              | 30             | 156735                        | ADVULQ-63-30-P-A  | 156 821                     | ADVULQ-63-30-A-P-A  |
|                              | 40             | 156736                        | ADVULQ-63-40-P-A  | 156 822                     | ADVULQ-63-40-A-P-A  |
|                              | 50             | 156737                        | ADVULQ-63-50-P-A  | 156 823                     | ADVULQ-63-50-A-P-A  |
|                              | 60             | 156738                        | ADVULQ-63-60-P-A  | 156 824                     | ADVULQ-63-60-A-P-A  |
|                              | 80             | 156739                        | ADVULQ-63-80-P-A  | 156 825                     | ADVULQ-63-80-A-P-A  |
| 80                           | 10             | 156740                        | ADVULQ-80-10-P-A  | 156826                      | ADVULQ-80-10-A-P-A  |
|                              | 15             | 156741                        | ADVULQ-80-15-P-A  | 156827                      | ADVULQ-80-15-A-P-A  |
|                              | 20             | 156742                        | ADVULQ-80-20-P-A  | 156828                      | ADVULQ-80-20-A-P-A  |
|                              | 25             | 156743                        | ADVULQ-80-25-P-A  | 156829                      | ADVULQ-80-25-A-P-A  |
|                              | 30             | 156744                        | ADVULQ-80-30-P-A  | 156830                      | ADVULQ-80-30-A-P-A  |
|                              | 40             | 156745                        | ADVULQ-80-40-P-A  | 156831                      | ADVULQ-80-40-A-P-A  |
|                              | 50             | 156746                        | ADVULQ-80-50-P-A  | 156832                      | ADVULQ-80-50-A-P-A  |
|                              | 60             | 156747                        | ADVULQ-80-60-P-A  | 156833                      | ADVULQ-80-60-A-P-A  |
|                              | 80             | 156748                        | ADVULQ-80-80-P-A  | 156834                      | ADVULQ-80-80-A-P-A  |
| 100                          | 10             | 156749                        | ADVULQ-100-10-P-A | 156835                      | ADVULQ-100-10-A-P-A |
|                              | 15             | 156750                        | ADVULQ-100-15-P-A | 156836                      | ADVULQ-100-15-A-P-A |
|                              | 20             | 156751                        | ADVULQ-100-20-P-A | 156837                      | ADVULQ-100-20-A-P-A |
|                              | 25             | 156752                        | ADVULQ-100-25-P-A | 156838                      | ADVULQ-100-25-A-P-A |
|                              | 30             | 156753                        | ADVULQ-100-30-P-A | 156839                      | ADVULQ-100-30-A-P-A |
|                              | 40             | 156754                        | ADVULQ-100-40-P-A | 156840                      | ADVULQ-100-40-A-P-A |
|                              | 50             | 156755                        | ADVULQ-100-50-P-A | 156841                      | ADVULQ-100-50-A-P-A |
|                              | 60             | 156756                        | ADVULQ-100-60-P-A | 156842                      | ADVULQ-100-60-A-P-A |
|                              | 80             | 156757                        | ADVULQ-100-80-P-A | 156843                      | ADVULQ-100-80-A-P-A |

## Datasheet – Double-acting, protected against rotation with square piston rod

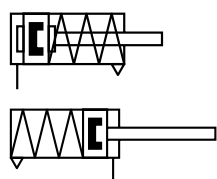
| Ordering data – Basic design            |                |                               |                       |                             |                         |
|-----------------------------------------|----------------|-------------------------------|-----------------------|-----------------------------|-------------------------|
| Piston Ø<br>[mm]                        | Stroke<br>[mm] | Piston rod with female thread |                       | Piston rod with male thread |                         |
|                                         |                | Part no.                      | Type                  | Part no.                    | Type                    |
| <b>S2 – Through piston rod</b>          |                |                               |                       |                             |                         |
| 12                                      | 1 ... 200      | 156100                        | ADVULQ-12-...-P-A     | 156140                      | ADVULQ-12-...-A-P-A     |
| 16                                      | 1 ... 200      | 156101                        | ADVULQ-16-...-P-A     | 156141                      | ADVULQ-16-...-A-P-A     |
| 20                                      | 1 ... 200      | 156102                        | ADVULQ-20-...-P-A     | 156142                      | ADVULQ-20-...-A-P-A     |
| 25                                      | 1 ... 200      | 156103                        | ADVULQ-25-...-P-A     | 156143                      | ADVULQ-25-...-A-P-A     |
| 32                                      | 1 ... 300      | 156104                        | ADVULQ-32-...-P-A     | 156144                      | ADVULQ-32-...-A-P-A     |
| 40                                      | 1 ... 300      | 156105                        | ADVULQ-40-...-P-A     | 156145                      | ADVULQ-40-...-A-P-A     |
| 50                                      | 1 ... 300      | 156106                        | ADVULQ-50-...-P-A     | 156146                      | ADVULQ-50-...-A-P-A     |
| 63                                      | 1 ... 300      | 156107                        | ADVULQ-63-...-P-A     | 156147                      | ADVULQ-63-...-A-P-A     |
| 80                                      | 1 ... 400      | 156108                        | ADVULQ-80-...-P-A     | 156148                      | ADVULQ-80-...-A-P-A     |
| 100                                     | 1 ... 400      | 156109                        | ADVULQ-100-...-P-A    | 156149                      | ADVULQ-100-...-A-P-A    |
| <b>S2 – Through piston rod</b>          |                |                               |                       |                             |                         |
| 12                                      | 1 ... 200      | 156110                        | ADVULQ-12-...-P-A-S2  | 156150                      | ADVULQ-12-...-A-P-A-S2  |
| 16                                      | 1 ... 200      | 156111                        | ADVULQ-16-...-P-A-S2  | 156151                      | ADVULQ-16-...-A-P-A-S2  |
| 20                                      | 1 ... 200      | 156112                        | ADVULQ-20-...-P-A-S2  | 156152                      | ADVULQ-20-...-A-P-A-S2  |
| 25                                      | 1 ... 200      | 156113                        | ADVULQ-25-...-P-A-S2  | 156153                      | ADVULQ-25-...-A-P-A-S2  |
| 32                                      | 1 ... 300      | 156114                        | ADVULQ-32-...-P-A-S2  | 156154                      | ADVULQ-32-...-A-P-A-S2  |
| 40                                      | 1 ... 300      | 156115                        | ADVULQ-40-...-P-A-S2  | 156155                      | ADVULQ-40-...-A-P-A-S2  |
| 50                                      | 1 ... 300      | 156116                        | ADVULQ-50-...-P-A-S2  | 156156                      | ADVULQ-50-...-A-P-A-S2  |
| 63                                      | 1 ... 300      | 156117                        | ADVULQ-63-...-P-A-S2  | 156157                      | ADVULQ-63-...-A-P-A-S2  |
| 80                                      | 1 ... 400      | 156118                        | ADVULQ-80-...-P-A-S2  | 156158                      | ADVULQ-80-...-A-P-A-S2  |
| 100                                     | 1 ... 400      | 156119                        | ADVULQ-100-...-P-A-S2 | 156159                      | ADVULQ-100-...-A-P-A-S2 |
| <b>S6 – Heat-resistant up to 120 °C</b> |                |                               |                       |                             |                         |
| 12                                      | 1 ... 200      | 156130                        | ADVULQ-12-...-P-A-S6  | 156190                      | ADVULQ-12-...-A-P-A-S6  |
| 16                                      | 1 ... 200      | 156131                        | ADVULQ-16-...-P-A-S6  | 156191                      | ADVULQ-16-...-A-P-A-S6  |
| 20                                      | 1 ... 200      | 156132                        | ADVULQ-20-...-P-A-S6  | 156192                      | ADVULQ-20-...-A-P-A-S6  |
| 25                                      | 1 ... 200      | 156133                        | ADVULQ-25-...-P-A-S6  | 156193                      | ADVULQ-25-...-A-P-A-S6  |
| 32                                      | 1 ... 300      | 156134                        | ADVULQ-32-...-P-A-S6  | 156194                      | ADVULQ-32-...-A-P-A-S6  |
| 40                                      | 1 ... 300      | 156135                        | ADVULQ-40-...-P-A-S6  | 156195                      | ADVULQ-40-...-A-P-A-S6  |
| 50                                      | 1 ... 300      | 156136                        | ADVULQ-50-...-P-A-S6  | 156196                      | ADVULQ-50-...-A-P-A-S6  |
| 63                                      | 1 ... 300      | 156137                        | ADVULQ-63-...-P-A-S6  | 156197                      | ADVULQ-63-...-A-P-A-S6  |
| 80                                      | 1 ... 400      | 156138                        | ADVULQ-80-...-P-A-S6  | 156198                      | ADVULQ-80-...-A-P-A-S6  |
| 100                                     | 1 ... 400      | 156139                        | ADVULQ-100-...-P-A-S6 | 156199                      | ADVULQ-100-...-A-P-A-S6 |

Datasheet – Double-acting, protected against rotation with square piston rod

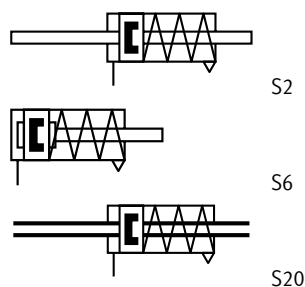
| Ordering data – Variants         |           |                               |      |                             |                          |
|----------------------------------|-----------|-------------------------------|------|-----------------------------|--------------------------|
| Piston Ø                         | Stroke    | Piston rod with female thread |      | Piston rod with male thread |                          |
| [mm]                             | [mm]      | Part no.                      | Type | Part no.                    | Type                     |
| S20 – Through, hollow piston rod |           |                               |      |                             |                          |
| 16                               | 1 ... 200 | –                             |      | 156161                      | ADVULQ-16-...-A-P-A-S20  |
| 20                               | 1 ... 200 |                               |      | 156162                      | ADVULQ-20-...-A-P-A-S20  |
| 25                               | 1 ... 200 |                               |      | 156163                      | ADVULQ-25-...-A-P-A-S20  |
| 32                               | 1 ... 300 |                               |      | 156164                      | ADVULQ-32-...-A-P-A-S20  |
| 40                               | 1 ... 300 |                               |      | 156165                      | ADVULQ-40-...-A-P-A-S20  |
| 50                               | 1 ... 300 |                               |      | 156166                      | ADVULQ-50-...-A-P-A-S20  |
| 63                               | 1 ... 300 |                               |      | 156167                      | ADVULQ-63-...-A-P-A-S20  |
| 80                               | 1 ... 400 |                               |      | 156168                      | ADVULQ-80-...-A-P-A-S20  |
| 100                              | 1 ... 400 |                               |      | 156169                      | ADVULQ-100-...-A-P-A-S20 |

## Datasheet – Single-acting, basic version

## Function



## Variants



Ø - Diameter  
12 ... 100 mm

l - Stroke length  
1 ... 25 mm

 www.festo.com  
Sets of wearing parts  
→ page 42



| General technical data                 |                    | 12                                                             | 16 | 20       | 25 | 32   | 40   | 50       | 63   | 80      | 100     |
|----------------------------------------|--------------------|----------------------------------------------------------------|----|----------|----|------|------|----------|------|---------|---------|
| Piston Ø                               |                    | 12                                                             | 16 | 20       | 25 | 32   | 40   | 50       | 63   | 80      | 100     |
| Pneumatic connection                   |                    | M5                                                             | M5 | M5       | M5 | G1/8 | G1/8 | G1/8     | G1/8 | G1/8    | G1/4    |
| Piston rod end                         | Female thread      | M3                                                             | M4 | M5       | M5 | M6   | M6   | M8       | M8   | M10     | M12     |
|                                        | Male thread        | M6                                                             | M8 | M10x1.25 |    |      |      | M12x1.25 |      | M16x1.5 | M20x1.5 |
| Operating medium                       |                    | Compressed air to ISO 8573-1:2010 [7:4:4]                      |    |          |    |      |      |          |      |         |         |
| Note on the operating/<br>pilot medium |                    | Lubricated operation possible (required for further operation) |    |          |    |      |      |          |      |         |         |
| Design                                 | Piston             |                                                                |    |          |    |      |      |          |      |         |         |
|                                        | Piston rod         |                                                                |    |          |    |      |      |          |      |         |         |
| Cushioning                             |                    | Elastic cushioning rings/plates at both ends                   |    |          |    |      |      |          |      |         |         |
| Position sensing                       |                    | Via proximity switch                                           |    |          |    |      |      |          |      |         |         |
| Type of mounting                       | With through-hole  |                                                                |    |          |    |      |      |          |      |         |         |
|                                        | With female thread |                                                                |    |          |    |      |      |          |      |         |         |
|                                        | Via accessories    |                                                                |    |          |    |      |      |          |      |         |         |
| Mounting position                      |                    | Any                                                            |    |          |    |      |      |          |      |         |         |

 **Note**

This product conforms to ISO 1179-1 and ISO 228-1

| Operating pressure           |       | 12           | 16           | 20           | 25 | 32           | 40 | 50 | 63           | 80 | 100 |
|------------------------------|-------|--------------|--------------|--------------|----|--------------|----|----|--------------|----|-----|
| Piston Ø                     |       | 12           | 16           | 20           | 25 | 32           | 40 | 50 | 63           | 80 | 100 |
| <b>Pushing variant AEVU</b>  |       |              |              |              |    |              |    |    |              |    |     |
| Piston rod at one end        | [MPa] | 0.15 ... 1   | 0.13 ... 1   | 0.1 ... 1    |    | 0.08 ... 1   |    |    | 0.06 ... 1   |    |     |
|                              | [bar] | 1.5 ... 10   | 1.3 ... 10   | 1 ... 10     |    | 0.8 ... 10   |    |    | 0.6 ... 10   |    |     |
|                              | [psi] | 21.8 ... 145 | 18.9 ... 145 | 14.5 ... 145 |    | 11.6 ... 145 |    |    | 8.7 ... 145  |    |     |
| Through piston rod S2/S20    | [MPa] | 0.17 ... 1   | 0.15 ... 1   | 0.14 ... 1   |    | 0.12 ... 1   |    |    | 0.1 ... 1    |    |     |
|                              | [bar] | 1.7 ... 10   | 1.5 ... 10   | 1.4 ... 10   |    | 1.2 ... 10   |    |    | 1 ... 10     |    |     |
|                              | [psi] | 24.7 ... 145 | 21.8 ... 145 | 20.3 ... 145 |    | 17.4 ... 145 |    |    | 14.5 ... 145 |    |     |
| <b>Pulling variant AEVUZ</b> |       |              |              |              |    |              |    |    |              |    |     |
| Piston rod at one end        | [MPa] | 0.15 ... 1   | 0.13 ... 1   | 0.1 ... 1    |    | 0.08 ... 1   |    |    |              |    |     |
|                              | [bar] | 1.5 ... 10   | 1.3 ... 10   | 1 ... 10     |    | 0.8 ... 10   |    |    |              |    |     |
|                              | [psi] | 21.8 ... 145 | 18.9 ... 145 | 14.5 ... 145 |    | 11.6 ... 145 |    |    |              |    |     |

## Datasheet – Single-acting, basic version

| Environmental conditions                     |               |            |
|----------------------------------------------|---------------|------------|
| Compact cylinder                             | Basic version | S6         |
| Ambient temperature <sup>1)</sup> [°C]       | –20 ... +80   | 0 ... +120 |
| Corrosion resistance class CRC <sup>2)</sup> | 2             | 2          |

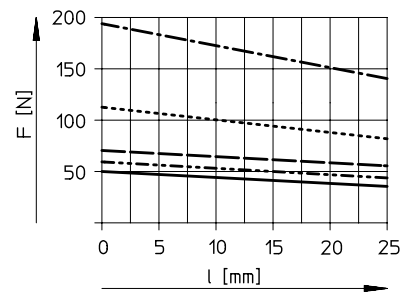
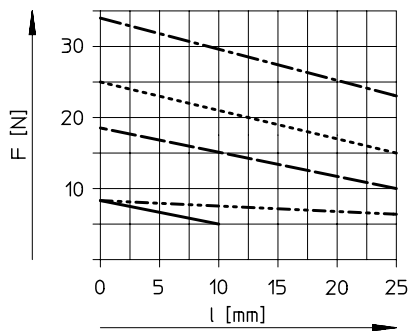
1) Note operating range of proximity switches

2) Corrosion resistance class 2 to Festo standard 940070

Components subject to moderate corrosion stress. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

| Forces [N]                    |        |     |     |     |     |     |      |      |      |      |
|-------------------------------|--------|-----|-----|-----|-----|-----|------|------|------|------|
| Piston Ø                      | 12     | 16  | 20  | 25  | 32  | 40  | 50   | 63   | 80   | 100  |
| Pushing variant AEVU          |        |     |     |     |     |     |      |      |      |      |
| Theoretical force at 0.6 MPa  | 59     | 111 | 171 | 269 | 450 | 704 | 1121 | 1799 | 2902 | 4516 |
| (6 bar, 87 psi),<br>advancing | S2/S20 | 42  | 81  | 123 | 221 | 382 | 636  | 999  | 1679 | 2733 |
| 4222                          |        |     |     |     |     |     |      |      |      |      |
| Pulling variant AEVUZ         |        |     |     |     |     |     |      |      |      |      |
| Theoretical force at 0.6 MPa  | 42     | 81  | 123 | 221 | 382 | 636 | 999  | 1679 | 2733 | 4222 |
| (6 bar, 87 psi),<br>advancing |        |     |     |     |     |     |      |      |      |      |

## Spring return force F as a function of stroke l



— AEVU/AEVUZ-12  
 - - - AEVU/AEVUZ-16  
 - - - AEVU/AEVUZ-20  
 ..... AEVU/AEVUZ-25  
 - . - . AEVU/AEVUZ-32

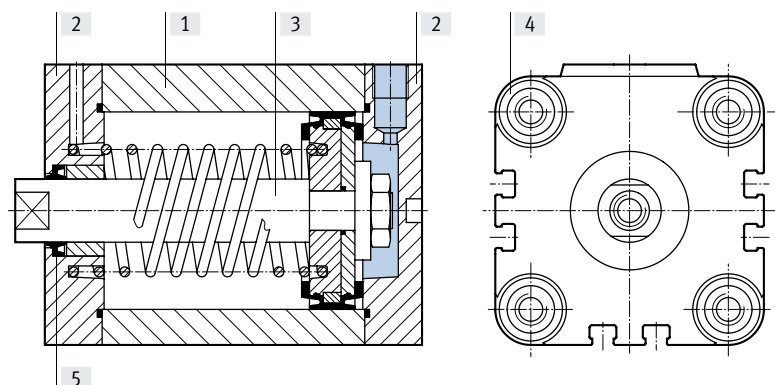
— AEVU/AEVUZ-40  
 - - - AEVU/AEVUZ-50  
 - - - AEVU/AEVUZ-63  
 ..... AEVU/AEVUZ-80  
 - . - . AEVU/AEVUZ-100

| Weight [g]                         |    |    |     |     |     |     |     |      |      |      |
|------------------------------------|----|----|-----|-----|-----|-----|-----|------|------|------|
| Piston Ø                           | 12 | 16 | 20  | 25  | 32  | 40  | 50  | 63   | 80   | 100  |
| Product weight with 0 mm stroke    | 87 | 89 | 149 | 180 | 300 | 433 | 560 | 1059 | 1772 | 2797 |
| Additional weight per 10 mm stroke | 15 | 15 | 23  | 28  | 40  | 59  | 72  | 107  | 168  | 177  |
| Moving mass with 0 mm stroke       | 8  | 12 | 20  | 26  | 49  | 63  | 112 | 134  | 307  | 614  |
| Additional mass per 10 mm stroke   | 2  | 4  | 6   | 6   | 9   | 9   | 16  | 16   | 25   | 38   |

# Datasheet – Single-acting, basic version

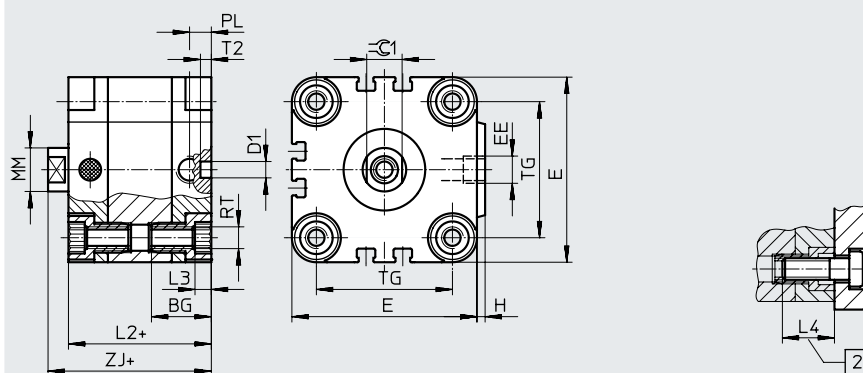
## Materials

Sectional view



| Compact cylinder    | Basic version           | S6                         |
|---------------------|-------------------------|----------------------------|
| [1] Cylinder barrel | Wrought aluminium alloy | Wrought aluminium alloy    |
| [2] Cover           | Wrought aluminium alloy | Wrought aluminium alloy    |
| [3] Piston rod      | ∅ 12 ... 32             | High-alloy stainless steel |
|                     | ∅ 40 ... 100            | High-alloy steel           |
| [4] Flange screws   | ∅ 12 ... 16             | High-alloy stainless steel |
|                     | ∅ 20 ... 100            | Galvanised steel           |
| [5] Dynamic seals   | Polyurethane            | Fluoro rubber              |

## Dimensions – Basic cylinder

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

**Note**

To mount from above with piston diameter 12 and 16 mm, only use 2 diagonal screws or use non-magnetic screws.

+ = plus stroke length  
[2] Minimum screw-in depth

| ∅   | BG   | D1<br>∅<br>H9 | E   | EE   | H   | L2   | L3 | L4 | MM<br>∅ | PL   | RT  | T2 | TG  | ZJ   | ⌀G1<br>h13 |
|-----|------|---------------|-----|------|-----|------|----|----|---------|------|-----|----|-----|------|------------|
| 12  | 18.5 | 6             | 29  | M5   | 1   | 38   | 3  | 16 | 6       | 8    | M4  | 4  | 18  | 42.5 | 5          |
| 16  | 18.5 | 6             | 29  | M5   | 1   | 38   | 3  | 16 | 8       | 8    | M4  | 4  | 18  | 42.5 | 7          |
| 20  | 18.5 | 6             | 36  | M5   | 1.5 | 38   | 4  | 18 | 10      | 8    | M5  | 4  | 22  | 42.5 | 9          |
| 25  | 18.5 | 6             | 40  | M5   | 1.5 | 39.5 | 4  | 18 | 10      | 8    | M5  | 4  | 26  | 45   | 9          |
| 32  | 21.5 | 6             | 50  | G1/8 | 2   | 44.5 | 5  | 20 | 12      | 8    | M6  | 4  | 32  | 50.5 | 10         |
| 40  | 21.5 | 6             | 60  | G1/8 | 2.5 | 45.5 | 5  | 20 | 12      | 8    | M6  | 4  | 42  | 52   | 10         |
| 50  | 22   | 6             | 68  | G1/8 | 3   | 45.5 | 6  | 20 | 16      | 8    | M8  | 4  | 50  | 53   | 13         |
| 63  | 24.5 | 8             | 87  | G1/8 | 4   | 50   | 8  | 25 | 16      | 8    | M10 | 4  | 62  | 57.5 | 13         |
| 80  | 27.5 | 8             | 107 | G1/8 | 4   | 56   | 8  | 25 | 20      | 8.5  | M10 | 4  | 82  | 64   | 17         |
| 100 | 32.5 | 8             | 128 | G1/4 | 5   | 66.5 | 8  | 25 | 25      | 10.5 | M10 | 4  | 103 | 76.5 | 22         |

**Note**

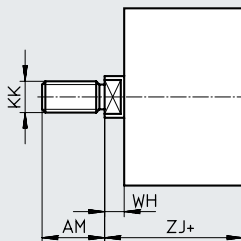
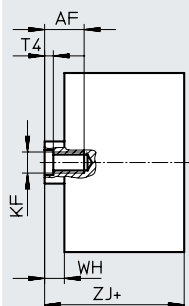
This product conforms to ISO 1179-1 and ISO 228-1

## Datasheet – Single-acting, basic version

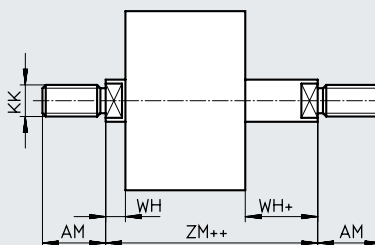
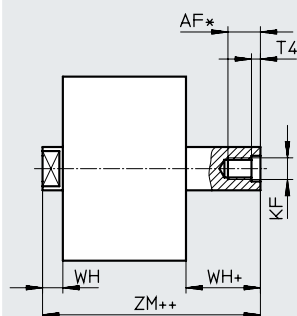
## Dimensions – Pushing variants AEU

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

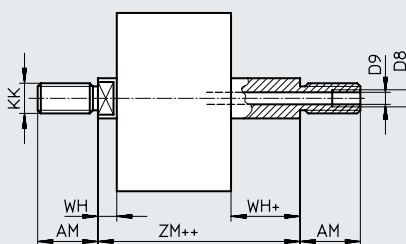
Basic version



S2 – Through piston rod



S20 – Through, hollow piston rod



+ = plus stroke length

++ = plus 2x stroke length

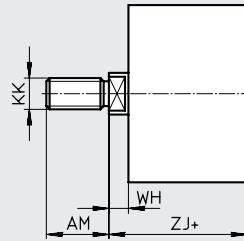
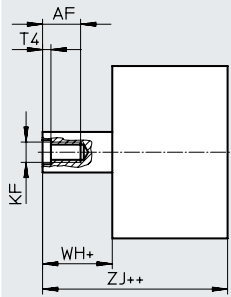
| ∅<br>[mm]         | AF               | AM | D8   | D9<br>∅ | KF  | KK       | T4  | WH  | ZJ   | ZM   |
|-------------------|------------------|----|------|---------|-----|----------|-----|-----|------|------|
| 12                | 8                | 16 | –    | 2.3     | M3  | M6       | 1.5 | 4.5 | 42.5 | 47   |
| 16                | 10               | 20 | –    | 3.2     | M4  | M8       | 1.5 | 4.5 | 42.5 | 47   |
| 20 <sup>2)</sup>  | 12               | 22 | –    | 3.8     | M5  | M10x1.25 | 2   | 4.5 | 42.5 | 47   |
| 25 <sup>2)</sup>  | 12               | 22 | –    | 3.8     | M5  | M10x1.25 | 2   | 5.5 | 45   | 50.5 |
| 32 <sup>2)</sup>  | 14               | 22 | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6   | 50.5 | 56.5 |
| 40 <sup>2)</sup>  | 14               | 22 | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6.5 | 52   | 58.5 |
| 50 <sup>2)</sup>  | 16               | 24 | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 53   | 60.5 |
| 63 <sup>2)</sup>  | 16               | 24 | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 57.5 | 65   |
| 80 <sup>2)</sup>  | 20 <sup>1)</sup> | 32 | G1/8 | 8       | M10 | M16x1.5  | 4.7 | 8   | 64   | 72   |
| 100 <sup>2)</sup> | 24 <sup>1)</sup> | 40 | G1/4 | 11.7    | M12 | M20x1.5  | 6.1 | 10  | 76.5 | 86.5 |

1) With a stroke &lt; 5 mm, the maximum screw-in depth is reduced by 5 mm

2) Nut for piston rod thread included in the scope of delivery

## Datasheet – Single-acting, basic version

## Dimensions – Pulling variants AEVUZ

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

| ∅<br>[mm]         | AF | AM | KF  | KK       | T4  | WH  | ZJ   |
|-------------------|----|----|-----|----------|-----|-----|------|
| 12                | 8  | 16 | M3  | M6       | 1.5 | 4.5 | 42.5 |
| 16                | 10 | 20 | M4  | M8       | 1.5 | 4.5 | 42.5 |
| 20 <sup>1)</sup>  | 12 | 22 | M5  | M10x1.25 | 2   | 4.5 | 42.5 |
| 25 <sup>1)</sup>  | 12 | 22 | M5  | M10x1.25 | 2   | 5.5 | 45   |
| 32 <sup>1)</sup>  | 14 | 22 | M6  | M10x1.25 | 2.6 | 6   | 50.5 |
| 40 <sup>1)</sup>  | 14 | 22 | M6  | M10x1.25 | 2.6 | 6.5 | 52   |
| 50 <sup>1)</sup>  | 16 | 24 | M8  | M12x1.25 | 3.3 | 7.5 | 53   |
| 63 <sup>1)</sup>  | 16 | 24 | M8  | M12x1.25 | 3.3 | 7.5 | 57.5 |
| 80 <sup>1)</sup>  | 20 | 32 | M10 | M16x1.5  | 4.7 | 8   | 64   |
| 100 <sup>1)</sup> | 24 | 40 | M12 | M20x1.5  | 6.1 | 10  | 76.5 |

1) Nut for piston rod thread included in the scope of delivery

## Datasheet – Single-acting, basic version

| Ordering data – Pushing variants, basic version, AEVU |                |                               |                 |                             |                   |
|-------------------------------------------------------|----------------|-------------------------------|-----------------|-----------------------------|-------------------|
| Piston Ø<br>[mm]                                      | Stroke<br>[mm] | Piston rod with female thread |                 | Piston rod with male thread |                   |
|                                                       |                | Part no.                      | Type            | Part no.                    | Type              |
| 12                                                    | 5              | 156930                        | AEVU-12-5-P-A   | 156976                      | AEVU-12-5-A-P-A   |
|                                                       | 10             | 156931                        | AEVU-12-10-P-A  | 156977                      | AEVU-12-10-A-P-A  |
| 16                                                    | 5              | 156935                        | AEVU-16-5-P-A   | 156981                      | AEVU-16-5-A-P-A   |
|                                                       | 10             | 156936                        | AEVU-16-10-P-A  | 156982                      | AEVU-16-10-A-P-A  |
|                                                       | 15             | 156937                        | AEVU-16-15-P-A  | 156983                      | AEVU-16-15-A-P-A  |
|                                                       | 20             | 156938                        | AEVU-16-20-P-A  | 156984                      | AEVU-16-20-A-P-A  |
|                                                       | 25             | 156939                        | AEVU-16-25-P-A  | 156985                      | AEVU-16-25-A-P-A  |
| 20                                                    | 5              | 156940                        | AEVU-20-5-P-A   | 156986                      | AEVU-20-5-A-P-A   |
|                                                       | 10             | 156941                        | AEVU-20-10-P-A  | 156987                      | AEVU-20-10-A-P-A  |
|                                                       | 15             | 156942                        | AEVU-20-15-P-A  | 156988                      | AEVU-20-15-A-P-A  |
|                                                       | 20             | 156943                        | AEVU-20-20-P-A  | 156989                      | AEVU-20-20-A-P-A  |
|                                                       | 25             | 156944                        | AEVU-20-25-P-A  | 156990                      | AEVU-20-25-A-P-A  |
| 25                                                    | 5              | 156945                        | AEVU-25-5-P-A   | 156991                      | AEVU-25-5-A-P-A   |
|                                                       | 10             | 156946                        | AEVU-25-10-P-A  | 156992                      | AEVU-25-10-A-P-A  |
|                                                       | 15             | 156947                        | AEVU-25-15-P-A  | 156993                      | AEVU-25-15-A-P-A  |
|                                                       | 20             | 156948                        | AEVU-25-20-P-A  | 156994                      | AEVU-25-20-A-P-A  |
|                                                       | 25             | 156949                        | AEVU-25-25-P-A  | 156995                      | AEVU-25-25-A-P-A  |
| 32                                                    | 5              | 156950                        | AEVU-32-5-P-A   | 156996                      | AEVU-32-5-A-P-A   |
|                                                       | 10             | 156951                        | AEVU-32-10-P-A  | 156997                      | AEVU-32-10-A-P-A  |
|                                                       | 15             | 156952                        | AEVU-32-15-P-A  | 156998                      | AEVU-32-15-A-P-A  |
|                                                       | 20             | 156953                        | AEVU-32-20-P-A  | 156999                      | AEVU-32-20-A-P-A  |
|                                                       | 25             | 156954                        | AEVU-32-25-P-A  | 157000                      | AEVU-32-25-A-P-A  |
| 40                                                    | 5              | 156955                        | AEVU-40-5-P-A   | 157001                      | AEVU-40-5-A-P-A   |
|                                                       | 10             | 156956                        | AEVU-40-10-P-A  | 157002                      | AEVU-40-10-A-P-A  |
|                                                       | 15             | 156957                        | AEVU-40-15-P-A  | 157003                      | AEVU-40-15-A-P-A  |
|                                                       | 20             | 156958                        | AEVU-40-20-P-A  | 157004                      | AEVU-40-20-A-P-A  |
|                                                       | 25             | 156959                        | AEVU-40-25-P-A  | 157005                      | AEVU-40-25-A-P-A  |
| 50                                                    | 10             | 156960                        | AEVU-50-10-P-A  | 157006                      | AEVU-50-10-A-P-A  |
|                                                       | 15             | 156961                        | AEVU-50-15-P-A  | 157007                      | AEVU-50-15-A-P-A  |
|                                                       | 20             | 156962                        | AEVU-50-20-P-A  | 157008                      | AEVU-50-20-A-P-A  |
|                                                       | 25             | 156963                        | AEVU-50-25-P-A  | 157009                      | AEVU-50-25-A-P-A  |
| 63                                                    | 10             | 156964                        | AEVU-63-10-P-A  | 157010                      | AEVU-63-10-A-P-A  |
|                                                       | 15             | 156965                        | AEVU-63-15-P-A  | 157011                      | AEVU-63-15-A-P-A  |
|                                                       | 20             | 156966                        | AEVU-63-20-P-A  | 157012                      | AEVU-63-20-A-P-A  |
|                                                       | 25             | 156967                        | AEVU-63-25-P-A  | 157013                      | AEVU-63-25-A-P-A  |
| 80                                                    | 10             | 156968                        | AEVU-80-10-P-A  | 157014                      | AEVU-80-10-A-P-A  |
|                                                       | 15             | 156969                        | AEVU-80-15-P-A  | 157015                      | AEVU-80-15-A-P-A  |
|                                                       | 20             | 156970                        | AEVU-80-20-P-A  | 157016                      | AEVU-80-20-A-P-A  |
|                                                       | 25             | 156971                        | AEVU-80-25-P-A  | 157017                      | AEVU-80-25-A-P-A  |
| 100                                                   | 10             | 156972                        | AEVU-100-10-P-A | 157018                      | AEVU-100-10-A-P-A |
|                                                       | 15             | 156973                        | AEVU-100-15-P-A | 157019                      | AEVU-100-15-A-P-A |
|                                                       | 20             | 156974                        | AEVU-100-20-P-A | 157020                      | AEVU-100-20-A-P-A |
|                                                       | 25             | 156975                        | AEVU-100-25-P-A | 157021                      | AEVU-100-25-A-P-A |

## Datasheet – Single-acting, basic version

| Ordering data – Pushing variants, AEVU |          |                               |                     |                             |                       |  |
|----------------------------------------|----------|-------------------------------|---------------------|-----------------------------|-----------------------|--|
| Piston Ø                               | Stroke   | Piston rod with female thread |                     | Piston rod with male thread |                       |  |
| [mm]                                   | [mm]     | Part no.                      | Type                | Part no.                    | Type                  |  |
| Variable stroke                        |          |                               |                     |                             |                       |  |
| 12                                     | 1 ... 10 | 156220                        | AEVU-12-...-P-A     | 156260                      | AEVU-12-...-A-P-A     |  |
| 16                                     | 1 ... 25 | 156221                        | AEVU-16-...-P-A     | 156261                      | AEVU-16-...-A-P-A     |  |
| 20                                     | 1 ... 25 | 156222                        | AEVU-20-...-P-A     | 156262                      | AEVU-20-...-A-P-A     |  |
| 25                                     | 1 ... 25 | 156223                        | AEVU-25-...-P-A     | 156263                      | AEVU-25-...-A-P-A     |  |
| 32                                     | 1 ... 25 | 156224                        | AEVU-32-...-P-A     | 156264                      | AEVU-32-...-A-P-A     |  |
| 40                                     | 1 ... 25 | 156225                        | AEVU-40-...-P-A     | 156265                      | AEVU-40-...-A-P-A     |  |
| 50                                     | 1 ... 25 | 156226                        | AEVU-50-...-P-A     | 156266                      | AEVU-50-...-A-P-A     |  |
| 63                                     | 1 ... 25 | 156227                        | AEVU-63-...-P-A     | 156267                      | AEVU-63-...-A-P-A     |  |
| 80                                     | 1 ... 25 | 156228                        | AEVU-80-...-P-A     | 156268                      | AEVU-80-...-A-P-A     |  |
| 100                                    | 1 ... 25 | 156229                        | AEVU-100-...-P-A    | 156269                      | AEVU-100-...-A-P-A    |  |
| S2 – Through piston rod                |          |                               |                     |                             |                       |  |
| 12                                     | 1 ... 10 | 156230                        | AEVU-12-...-P-A-S2  | 156270                      | AEVU-12-...-A-P-A-S2  |  |
| 16                                     | 1 ... 25 | 156231                        | AEVU-16-...-P-A-S2  | 156271                      | AEVU-16-...-A-P-A-S2  |  |
| 20                                     | 1 ... 25 | 156232                        | AEVU-20-...-P-A-S2  | 156272                      | AEVU-20-...-A-P-A-S2  |  |
| 25                                     | 1 ... 25 | 156233                        | AEVU-25-...-P-A-S2  | 156273                      | AEVU-25-...-A-P-A-S2  |  |
| 32                                     | 1 ... 25 | 156234                        | AEVU-32-...-P-A-S2  | 156274                      | AEVU-32-...-A-P-A-S2  |  |
| 40                                     | 1 ... 25 | 156235                        | AEVU-40-...-P-A-S2  | 156275                      | AEVU-40-...-A-P-A-S2  |  |
| 50                                     | 1 ... 25 | 156236                        | AEVU-50-...-P-A-S2  | 156276                      | AEVU-50-...-A-P-A-S2  |  |
| 63                                     | 1 ... 25 | 156237                        | AEVU-63-...-P-A-S2  | 156277                      | AEVU-63-...-A-P-A-S2  |  |
| 80                                     | 1 ... 25 | 156238                        | AEVU-80-...-P-A-S2  | 156278                      | AEVU-80-...-A-P-A-S2  |  |
| 100                                    | 1 ... 25 | 156239                        | AEVU-100-...-P-A-S2 | 156279                      | AEVU-100-...-A-P-A-S2 |  |
| S6 – Heat-resistant up to 120 °C       |          |                               |                     |                             |                       |  |
| 12                                     | 1 ... 10 | 156250                        | AEVU-12-...-P-A-S6  | 156310                      | AEVU-12-...-A-P-A-S6  |  |
| 16                                     | 1 ... 25 | 156251                        | AEVU-16-...-P-A-S6  | 156311                      | AEVU-16-...-A-P-A-S6  |  |
| 20                                     | 1 ... 25 | 156252                        | AEVU-20-...-P-A-S6  | 156312                      | AEVU-20-...-A-P-A-S6  |  |
| 25                                     | 1 ... 25 | 156253                        | AEVU-25-...-P-A-S6  | 156313                      | AEVU-25-...-A-P-A-S6  |  |
| 32                                     | 1 ... 25 | 156254                        | AEVU-32-...-P-A-S6  | 156314                      | AEVU-32-...-A-P-A-S6  |  |
| 40                                     | 1 ... 25 | 156255                        | AEVU-40-...-P-A-S6  | 156315                      | AEVU-40-...-A-P-A-S6  |  |
| 50                                     | 1 ... 25 | 156256                        | AEVU-50-...-P-A-S6  | 156316                      | AEVU-50-...-A-P-A-S6  |  |
| 63                                     | 1 ... 25 | 156257                        | AEVU-63-...-P-A-S6  | 156317                      | AEVU-63-...-A-P-A-S6  |  |
| 80                                     | 1 ... 25 | 156258                        | AEVU-80-...-P-A-S6  | 156318                      | AEVU-80-...-A-P-A-S6  |  |
| 100                                    | 1 ... 25 | 156259                        | AEVU-100-...-P-A-S6 | 156319                      | AEVU-100-...-A-P-A-S6 |  |

## Datasheet – Single-acting, basic version

## Ordering data – Pushing variants, AEVU

| Piston Ø<br>[mm]                 | Stroke<br>[mm] | Piston rod with female thread |      | Piston rod with male thread |                        |
|----------------------------------|----------------|-------------------------------|------|-----------------------------|------------------------|
|                                  |                | Part no.                      | Type | Part no.                    | Type                   |
| S20 – Through, hollow piston rod |                |                               |      |                             |                        |
| 12                               | 1 ... 10       | -                             |      | 156280                      | AEVU-12-...-A-P-A-S20  |
| 16                               | 1 ... 25       |                               |      | 156281                      | AEVU-16-...-A-P-A-S20  |
| 20                               | 1 ... 25       |                               |      | 156282                      | AEVU-20-...-A-P-A-S20  |
| 25                               | 1 ... 25       |                               |      | 156283                      | AEVU-25-...-A-P-A-S20  |
| 32                               | 1 ... 25       |                               |      | 156284                      | AEVU-32-...-A-P-A-S20  |
| 40                               | 1 ... 25       |                               |      | 156285                      | AEVU-40-...-A-P-A-S20  |
| 50                               | 1 ... 25       |                               |      | 156286                      | AEVU-50-...-A-P-A-S20  |
| 63                               | 1 ... 25       |                               |      | 156287                      | AEVU-63-...-A-P-A-S20  |
| 80                               | 1 ... 25       |                               |      | 156288                      | AEVU-80-...-A-P-A-S20  |
| 100                              | 1 ... 25       |                               |      | 156289                      | AEVU-100-...-A-P-A-S20 |

## Ordering data – Pulling variants, basic version, AEVUZ

| Piston Ø<br>[mm] | Stroke<br>[mm] | Piston rod with female thread |                 | Piston rod with male thread |                   |
|------------------|----------------|-------------------------------|-----------------|-----------------------------|-------------------|
|                  |                | Part no.                      | Type            | Part no.                    | Type              |
| 12               | 5              | 157206                        | AEVUZ-12-5-P-A  | 157252                      | AEVUZ-12-5-A-P-A  |
|                  | 10             | 157207                        | AEVUZ-12-10-P-A | 157253                      | AEVUZ-12-10-A-P-A |
| 16               | 5              | 157211                        | AEVUZ-16-5-P-A  | 157257                      | AEVUZ-16-5-A-P-A  |
|                  | 10             | 157212                        | AEVUZ-16-10-P-A | 157258                      | AEVUZ-16-10-A-P-A |
|                  | 15             | 157213                        | AEVUZ-16-15-P-A | 157259                      | AEVUZ-16-15-A-P-A |
|                  | 20             | 157214                        | AEVUZ-16-20-P-A | 157260                      | AEVUZ-16-20-A-P-A |
|                  | 25             | 157215                        | AEVUZ-16-25-P-A | 157261                      | AEVUZ-16-25-A-P-A |
| 20               | 5              | 157216                        | AEVUZ-20-5-P-A  | 157262                      | AEVUZ-20-5-A-P-A  |
|                  | 10             | 157217                        | AEVUZ-20-10-P-A | 157263                      | AEVUZ-20-10-A-P-A |
|                  | 15             | 157218                        | AEVUZ-20-15-P-A | 157264                      | AEVUZ-20-15-A-P-A |
|                  | 20             | 157219                        | AEVUZ-20-20-P-A | 157265                      | AEVUZ-20-20-A-P-A |
|                  | 25             | 157220                        | AEVUZ-20-25-P-A | 157266                      | AEVUZ-20-25-A-P-A |
| 25               | 5              | 157221                        | AEVUZ-25-5-P-A  | 157267                      | AEVUZ-25-5-A-P-A  |
|                  | 10             | 157222                        | AEVUZ-25-10-P-A | 157268                      | AEVUZ-25-10-A-P-A |
|                  | 15             | 157223                        | AEVUZ-25-15-P-A | 157269                      | AEVUZ-25-15-A-P-A |
|                  | 20             | 157224                        | AEVUZ-25-20-P-A | 157270                      | AEVUZ-25-20-A-P-A |
|                  | 25             | 157225                        | AEVUZ-25-25-P-A | 157271                      | AEVUZ-25-25-A-P-A |
| 32               | 5              | 157226                        | AEVUZ-32-5-P-A  | 157272                      | AEVUZ-32-5-A-P-A  |
|                  | 10             | 157227                        | AEVUZ-32-10-P-A | 157273                      | AEVUZ-32-10-A-P-A |
|                  | 15             | 157228                        | AEVUZ-32-15-P-A | 157274                      | AEVUZ-32-15-A-P-A |
|                  | 20             | 157229                        | AEVUZ-32-20-P-A | 157275                      | AEVUZ-32-20-A-P-A |
|                  | 25             | 157230                        | AEVUZ-32-25-P-A | 157276                      | AEVUZ-32-25-A-P-A |

## Datasheet – Single-acting, basic version

| Ordering data – Pulling variants, basic version, AEVUZ |                |                               |                  |                             |                    |
|--------------------------------------------------------|----------------|-------------------------------|------------------|-----------------------------|--------------------|
| Piston Ø<br>[mm]                                       | Stroke<br>[mm] | Piston rod with female thread |                  | Piston rod with male thread |                    |
|                                                        |                | Part no.                      | Type             | Part no.                    | Type               |
| 40                                                     | 5              | 157231                        | AEVUZ-40-5-P-A   | 157277                      | AEVUZ-40-5-A-P-A   |
|                                                        | 10             | 157232                        | AEVUZ-40-10-P-A  | 157278                      | AEVUZ-40-10-A-P-A  |
|                                                        | 15             | 157233                        | AEVUZ-40-15-P-A  | 157279                      | AEVUZ-40-15-A-P-A  |
|                                                        | 20             | 157234                        | AEVUZ-40-20-P-A  | 157280                      | AEVUZ-40-20-A-P-A  |
|                                                        | 25             | 157235                        | AEVUZ-40-25-P-A  | 157281                      | AEVUZ-40-25-A-P-A  |
| 50                                                     | 10             | 157236                        | AEVUZ-50-10-P-A  | 157282                      | AEVUZ-50-10-A-P-A  |
|                                                        | 15             | 157237                        | AEVUZ-50-15-P-A  | 157283                      | AEVUZ-50-15-A-P-A  |
|                                                        | 20             | 157238                        | AEVUZ-50-20-P-A  | 157284                      | AEVUZ-50-20-A-P-A  |
|                                                        | 25             | 157239                        | AEVUZ-50-25-P-A  | 157285                      | AEVUZ-50-25-A-P-A  |
| 63                                                     | 10             | 157240                        | AEVUZ-63-10-P-A  | 157286                      | AEVUZ-63-10-A-P-A  |
|                                                        | 15             | 157241                        | AEVUZ-63-15-P-A  | 157287                      | AEVUZ-63-15-A-P-A  |
|                                                        | 20             | 157242                        | AEVUZ-63-20-P-A  | 157288                      | AEVUZ-63-20-A-P-A  |
|                                                        | 25             | 157243                        | AEVUZ-63-25-P-A  | 157289                      | AEVUZ-63-25-A-P-A  |
| 80                                                     | 10             | 157244                        | AEVUZ-80-10-P-A  | 157290                      | AEVUZ-80-10-A-P-A  |
|                                                        | 15             | 157245                        | AEVUZ-80-15-P-A  | 157291                      | AEVUZ-80-15-A-P-A  |
|                                                        | 20             | 157246                        | AEVUZ-80-20-P-A  | 157292                      | AEVUZ-80-20-A-P-A  |
|                                                        | 25             | 157247                        | AEVUZ-80-25-P-A  | 157293                      | AEVUZ-80-25-A-P-A  |
| 100                                                    | 10             | 157248                        | AEVUZ-100-10-P-A | 157294                      | AEVUZ-100-10-A-P-A |
|                                                        | 15             | 157249                        | AEVUZ-100-15-P-A | 157295                      | AEVUZ-100-15-A-P-A |
|                                                        | 20             | 157250                        | AEVUZ-100-20-P-A | 157296                      | AEVUZ-100-20-A-P-A |
|                                                        | 25             | 157251                        | AEVUZ-100-25-P-A | 157297                      | AEVUZ-100-25-A-P-A |

| Ordering data – Pulling variants, AEVUZ |                |                               |                      |                             |                        |
|-----------------------------------------|----------------|-------------------------------|----------------------|-----------------------------|------------------------|
| Piston ø<br>[mm]                        | Stroke<br>[mm] | Piston rod with female thread |                      | Piston rod with male thread |                        |
|                                         |                | Part no.                      | Type                 | Part no.                    | Type                   |
| Variable stroke                         |                |                               |                      |                             |                        |
| 12                                      | 1 ... 10       | 156460                        | AEVUZ-12-...-P-A     | 156480                      | AEVUZ-12-...-A-P-A     |
| 16                                      | 1 ... 25       | 156461                        | AEVUZ-16-...-P-A     | 156481                      | AEVUZ-16-...-A-P-A     |
| 20                                      | 1 ... 25       | 156462                        | AEVUZ-20-...-P-A     | 156482                      | AEVUZ-20-...-A-P-A     |
| 25                                      | 1 ... 25       | 156463                        | AEVUZ-25-...-P-A     | 156483                      | AEVUZ-25-...-A-P-A     |
| 32                                      | 1 ... 25       | 156464                        | AEVUZ-32-...-P-A     | 156484                      | AEVUZ-32-...-A-P-A     |
| 40                                      | 1 ... 25       | 156465                        | AEVUZ-40-...-P-A     | 156485                      | AEVUZ-40-...-A-P-A     |
| 50                                      | 1 ... 25       | 156466                        | AEVUZ-50-...-P-A     | 156486                      | AEVUZ-50-...-A-P-A     |
| 63                                      | 1 ... 25       | 156467                        | AEVUZ-63-...-P-A     | 156487                      | AEVUZ-63-...-A-P-A     |
| 80                                      | 1 ... 25       | 156468                        | AEVUZ-80-...-P-A     | 156488                      | AEVUZ-80-...-A-P-A     |
| 100                                     | 1 ... 25       | 156469                        | AEVUZ-100-...-P-A    | 156489                      | AEVUZ-100-...-A-P-A    |
| S6 – Heat-resistant up to 120 °C        |                |                               |                      |                             |                        |
| 12                                      | 1 ... 10       | 156470                        | AEVUZ-12-...-P-A-S6  | 156490                      | AEVUZ-12-...-A-P-A-S6  |
| 16                                      | 1 ... 25       | 156471                        | AEVUZ-16-...-P-A-S6  | 156491                      | AEVUZ-16-...-A-P-A-S6  |
| 20                                      | 1 ... 25       | 156472                        | AEVUZ-20-...-P-A-S6  | 156492                      | AEVUZ-20-...-A-P-A-S6  |
| 25                                      | 1 ... 25       | 156473                        | AEVUZ-25-...-P-A-S6  | 156493                      | AEVUZ-25-...-A-P-A-S6  |
| 32                                      | 1 ... 25       | 156474                        | AEVUZ-32-...-P-A-S6  | 156494                      | AEVUZ-32-...-A-P-A-S6  |
| 40                                      | 1 ... 25       | 156475                        | AEVUZ-40-...-P-A-S6  | 156495                      | AEVUZ-40-...-A-P-A-S6  |
| 50                                      | 1 ... 25       | 156476                        | AEVUZ-50-...-P-A-S6  | 156496                      | AEVUZ-50-...-A-P-A-S6  |
| 63                                      | 1 ... 25       | 156477                        | AEVUZ-63-...-P-A-S6  | 156497                      | AEVUZ-63-...-A-P-A-S6  |
| 80                                      | 1 ... 25       | 156478                        | AEVUZ-80-...-P-A-S6  | 156498                      | AEVUZ-80-...-A-P-A-S6  |
| 100                                     | 1 ... 25       | 156479                        | AEVUZ-100-...-P-A-S6 | 156499                      | AEVUZ-100-...-A-P-A-S6 |

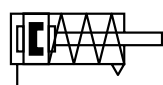
Datasheet – Single-acting, basic version

| Ordering data – Sets of wearing parts |               |                                    |                                  |                                       |
|---------------------------------------|---------------|------------------------------------|----------------------------------|---------------------------------------|
|                                       | Part no.      | Type                               | Part no.                         | Type                                  |
| Piston Ø                              | Basic version |                                    | S6 – Heat-resistant up to 120 °C |                                       |
| 32                                    | 121119        | AEVU-32-...-(A)-P-A <sup>1)</sup>  | 383563                           | AEVU-32-...-(A)-P-A-S6 <sup>1)</sup>  |
| 40                                    | 121120        | AEVU-40-...-(A)-P-A <sup>1)</sup>  | 383564                           | AEVU-40-...-(A)-P-A-S6 <sup>1)</sup>  |
| 50                                    | 121121        | AEVU-50-...-(A)-P-A <sup>1)</sup>  | 383565                           | AEVU-50-...-(A)-P-A-S6 <sup>1)</sup>  |
| 63                                    | 121122        | AEVU-63-...-(A)-P-A <sup>1)</sup>  | 383566                           | AEVU-63-...-(A)-P-A-S6 <sup>1)</sup>  |
| 80                                    | 121123        | AEVU-80-...-(A)-P-A <sup>1)</sup>  | 383567                           | AEVU-80-...-(A)-P-A-S6 <sup>1)</sup>  |
| 100                                   | 121124        | AEVU-100-...-(A)-P-A <sup>1)</sup> | 383568                           | AEVU-100-...-(A)-P-A-S6 <sup>1)</sup> |

1) Assembly grease included in the scope of delivery  
2) Assembly grease not included in scope of delivery. If required, please order separately using part no. 329 555 (20 ml)

# Datasheet – Single-acting, protected against rotation with square piston rod

## Function



## Variants



S2

Ø - Diameter  
16 ... 100 mm

l - Stroke length  
1 ... 25 mm

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AEVULQ-...-P-A



AEVULQ-...-P-AS2

| General technical data                 |               | 16                                                             | 20       | 25 | 32   | 40   | 50       | 63   | 80      | 100     |
|----------------------------------------|---------------|----------------------------------------------------------------|----------|----|------|------|----------|------|---------|---------|
| Piston Ø                               |               | 16                                                             | 20       | 25 | 32   | 40   | 50       | 63   | 80      | 100     |
| Pneumatic connection                   |               | M5                                                             | M5       | M5 | G1/8 | G1/8 | G1/8     | G1/8 | G1/8    | G1/4    |
| Piston rod end                         | Female thread | M4                                                             | M5       | M5 | M6   | M6   | M8       | M8   | M10     | M12     |
|                                        | Male thread   | M8                                                             | M10x1.25 |    |      |      | M12x1.25 |      | M16x1.5 | M20x1.5 |
| Operating medium                       |               | Compressed air to ISO 8573-1:2010 [7:4:4]                      |          |    |      |      |          |      |         |         |
| Note on the operating/<br>pilot medium |               | Lubricated operation possible (required for further operation) |          |    |      |      |          |      |         |         |
| Design                                 |               | Piston                                                         |          |    |      |      |          |      |         |         |
|                                        |               | Piston rod                                                     |          |    |      |      |          |      |         |         |
| Cushioning                             |               | Elastic cushioning rings/plates at both ends                   |          |    |      |      |          |      |         |         |
| Position sensing                       |               | Via proximity switch                                           |          |    |      |      |          |      |         |         |
| Type of mounting                       |               | With through-hole                                              |          |    |      |      |          |      |         |         |
|                                        |               | With female thread                                             |          |    |      |      |          |      |         |         |
|                                        |               | Via accessories                                                |          |    |      |      |          |      |         |         |
| Mounting position                      |               | Any                                                            |          |    |      |      |          |      |         |         |

- **Note**

This product conforms to ISO 1179-1  
and ISO 228-1

| Operating pressure    |       | 16           | 20           | 25 | 32           | 40 | 50 | 63           | 80 | 100 |
|-----------------------|-------|--------------|--------------|----|--------------|----|----|--------------|----|-----|
| Piston rod at one end | [MPa] | 0.15 ... 1   | 0.1 ... 1    |    |              |    |    |              |    |     |
|                       | [bar] | 1.5 ... 10   | 1 ... 10     |    |              |    |    |              |    |     |
|                       | [psi] | 21.8 ... 145 | 14.5 ... 145 |    |              |    |    |              |    |     |
| Through piston rod S2 | [MPa] | 0.15 ... 1   |              |    | 0.12 ... 1   |    |    | 0.1 ... 1    |    |     |
|                       | [bar] | 1.5 ... 10   |              |    | 1.2 ... 10   |    |    | 1 ... 10     |    |     |
|                       | [psi] | 21.8 ... 145 |              |    | 17.4 ... 145 |    |    | 14.5 ... 145 |    |     |

| Environmental conditions                     |      | Basic version |
|----------------------------------------------|------|---------------|
| Compact cylinder                             |      | Basic version |
| Ambient temperature <sup>1)</sup>            | [°C] | -20 ... +80   |
| Corrosion resistance class CRC <sup>2)</sup> |      | 2             |

1) Note operating range of proximity switches

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

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

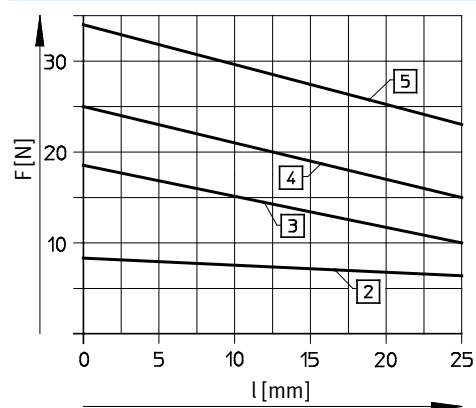
## Datasheet – Single-acting, protected against rotation with square piston rod

| Forces [N]                                                    |    | 16  | 20  | 25  | 32  | 40  | 50   | 63   | 80   | 100  |
|---------------------------------------------------------------|----|-----|-----|-----|-----|-----|------|------|------|------|
| Piston $\varnothing$                                          |    | 16  | 20  | 25  | 32  | 40  | 50   | 63   | 80   | 100  |
| Theoretical force at 0.6 MPa<br>(6 bar, 87 psi),<br>advancing | S2 | 111 | 171 | 269 | 450 | 704 | 1121 | 1799 | 2902 | 4516 |
|                                                               |    | 81  | 123 | 221 | 382 | 636 | 999  | 1679 | 2733 | 4222 |

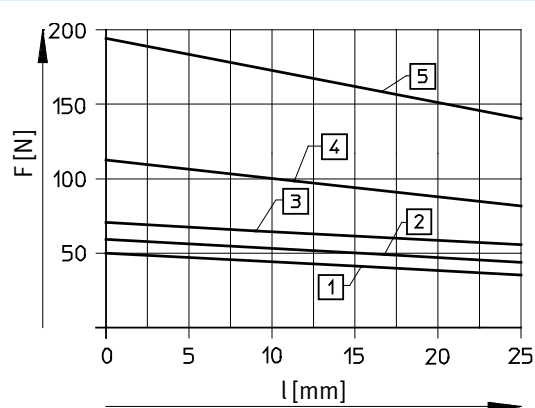
| Technical data – Square piston rod          |           | 16   | 20   | 25   | 32   | 40   | 50   | 63   | 80   | 100  |
|---------------------------------------------|-----------|------|------|------|------|------|------|------|------|------|
| Piston $\varnothing$                        |           | 16   | 20   | 25   | 32   | 40   | 50   | 63   | 80   | 100  |
| Max. torque at the piston rod <sup>1)</sup> | [Nm]      | 0.20 | 0.45 | 0.45 | 0.80 | 0.80 | 1.10 | 1.10 | 1.50 | 3.00 |
| Max. torsional backlash of piston<br>rod    | [°]       | ±0.9 | ±0.8 | ±0.8 | ±0.6 | ±0.6 | ±0.5 | ±0.5 | ±0.4 | ±0.4 |
| Piston rod distortion                       | [°/50 mm] | 0.30 | 0.25 | 0.25 | 0.20 | 0.20 | 0.15 | 0.15 | 0.15 | 0.09 |

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

## Spring return force F as a function of stroke l



- [2]  $\varnothing$  16  
[3]  $\varnothing$  20  
[4]  $\varnothing$  25  
[5]  $\varnothing$  32



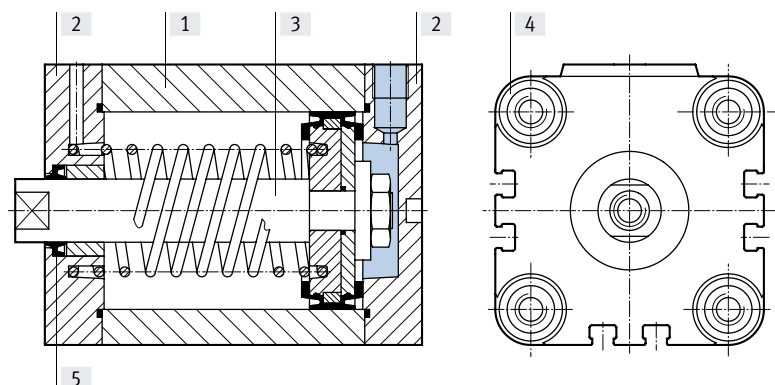
- [1]  $\varnothing$  40  
[2]  $\varnothing$  50  
[3]  $\varnothing$  63  
[4]  $\varnothing$  80  
[5]  $\varnothing$  100

| Weight [g]                         |  | 16 | 20  | 25  | 32  | 40  | 50  | 63   | 80   | 100  |
|------------------------------------|--|----|-----|-----|-----|-----|-----|------|------|------|
| Piston $\varnothing$               |  | 16 | 20  | 25  | 32  | 40  | 50  | 63   | 80   | 100  |
| Product weight with 0 mm stroke    |  | 89 | 149 | 180 | 300 | 433 | 560 | 1059 | 1772 | 2797 |
| Additional weight per 10 mm stroke |  | 15 | 23  | 28  | 40  | 59  | 72  | 107  | 168  | 177  |
| Moving mass with 0 mm stroke       |  | 12 | 20  | 26  | 49  | 63  | 112 | 134  | 307  | 614  |
| Additional mass per 10 mm stroke   |  | 4  | 6   | 6   | 9   | 9   | 16  | 16   | 25   | 38   |

# Datasheet – Single-acting, protected against rotation with square piston rod

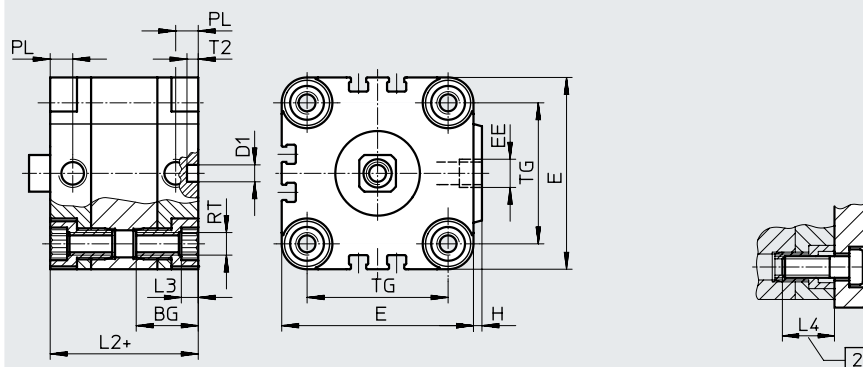
## Materials

Sectional view



| Compact cylinder |                 | Basic version           |
|------------------|-----------------|-------------------------|
| [1]              | Cylinder barrel | Wrought aluminium alloy |
| [2]              | Cover           | Wrought aluminium alloy |
| [3]              | Piston rod      | ∅ 16 ... 32             |
|                  |                 | ∅ 40 ... 100            |
| [4]              | Flange screws   | ∅ 16                    |
|                  |                 | ∅ 20 ... 100            |
| [5]              | Dynamic seals   | Polyurethane            |

## Dimensions – Basic cylinder

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

### Note

To mount from above with piston diameter 16 mm, only use 2 diagonal screws or use non-magnetic screws.

+ = plus stroke length

[2] Minimum screw-in depth

| ∅<br>[mm] | BG   | D1<br>∅<br>H9 | E   | EE   | H   | L2   | L3 | L4 | PL   | RT  | T2<br>±0.2 | TG  |
|-----------|------|---------------|-----|------|-----|------|----|----|------|-----|------------|-----|
| 16        | 18.5 | 6             | 29  | M5   | 1   | 38   | 3  | 16 | 8    | M4  | 4          | 18  |
| 20        | 18.5 | 6             | 36  | M5   | 1.5 | 38   | 4  | 18 | 8    | M5  | 4          | 22  |
| 25        | 18.5 | 6             | 40  | M5   | 1.5 | 39.5 | 4  | 18 | 8    | M5  | 4          | 26  |
| 32        | 21.5 | 6             | 50  | G1/8 | 2   | 44.5 | 5  | 20 | 8    | M6  | 4          | 32  |
| 40        | 21.5 | 6             | 60  | G1/8 | 2.5 | 45.5 | 5  | 20 | 8    | M6  | 4          | 42  |
| 50        | 22   | 6             | 68  | G1/8 | 3   | 45.5 | 6  | 20 | 8    | M8  | 4          | 50  |
| 63        | 24.5 | 8             | 87  | G1/8 | 4   | 50   | 8  | 25 | 8    | M10 | 4          | 62  |
| 80        | 27.5 | 8             | 107 | G1/8 | 4   | 56   | 8  | 25 | 8.5  | M10 | 4          | 82  |
| 100       | 32.5 | 8             | 128 | G1/4 | 5   | 66.5 | 8  | 25 | 10.5 | M10 | 4          | 103 |



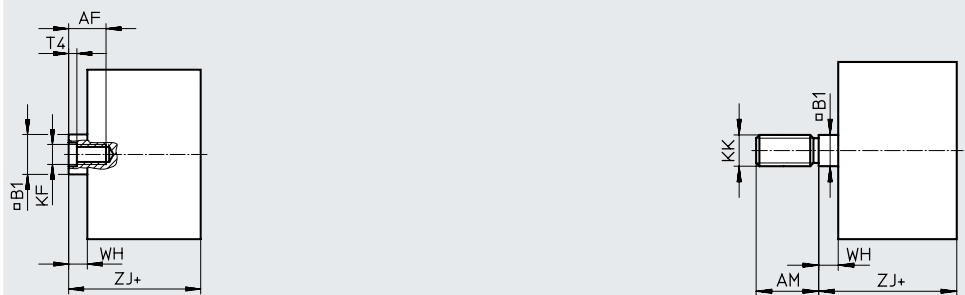
### Note

This product conforms to ISO 1179-1 and ISO 228-1

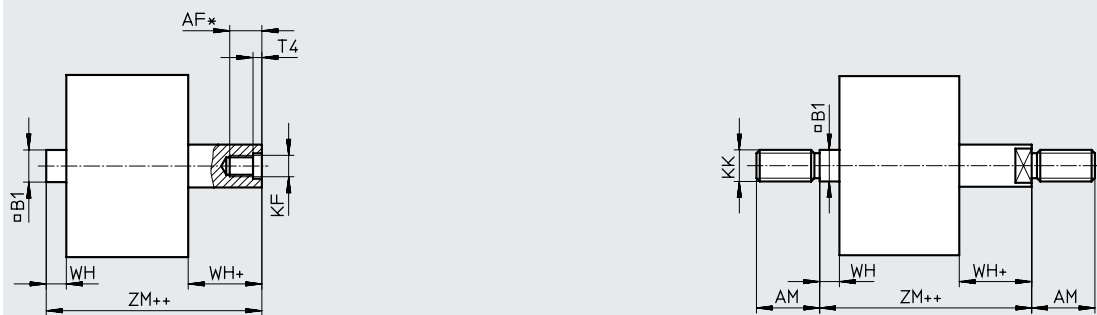
Datasheet – Single-acting, protected against rotation with square piston rod

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

Basic version



S2 – Through piston rod



| ∅<br>[mm]         | AF               | AM | B1<br>□ | D8   | D9<br>∅ | KF  | KK       | T4  | WH  | ZJ   | ZM   |
|-------------------|------------------|----|---------|------|---------|-----|----------|-----|-----|------|------|
| 16                | 10               | 20 | 7       | –    | 3.2     | M4  | M8       | 1.5 | 4.5 | 42.5 | 47   |
| 20 <sup>2)</sup>  | 12               | 22 | 9       | –    | 3.8     | M5  | M10x1.25 | 2   | 4.5 | 42.5 | 47   |
| 25 <sup>2)</sup>  | 12               | 22 | 9       | –    | 3.8     | M5  | M10x1.25 | 2   | 5.5 | 45   | 50.5 |
| 32 <sup>2)</sup>  | 14               | 22 | 10      | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6   | 50.5 | 56.5 |
| 40 <sup>2)</sup>  | 14               | 22 | 10      | –    | 4.5     | M6  | M10x1.25 | 2.6 | 6.5 | 52   | 58.5 |
| 50 <sup>2)</sup>  | 16               | 24 | 12      | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 53   | 60.5 |
| 63 <sup>2)</sup>  | 16               | 24 | 12      | –    | 6       | M8  | M12x1.25 | 3.3 | 7.5 | 57.5 | 65   |
| 80 <sup>2)</sup>  | 20 <sup>1)</sup> | 32 | 16      | G1/8 | 8       | M10 | M16x1.5  | 4.7 | 8   | 64   | 72   |
| 100 <sup>2)</sup> | 24 <sup>1)</sup> | 40 | 20      | G1/4 | 11.7    | M12 | M20x1.5  | 6.1 | 10  | 76.5 | 86.5 |

1) With a stroke < 5 mm, the maximum screw-in depth is reduced by 5 mm  
2) Nut for piston rod thread included in the scope of delivery

## Datasheet – Single-acting, protected against rotation with square piston rod

| Ordering data – Basic version AEVULQ |                |                               |                   |                             |                     |
|--------------------------------------|----------------|-------------------------------|-------------------|-----------------------------|---------------------|
| Piston Ø<br>[mm]                     | Stroke<br>[mm] | Piston rod with female thread |                   | Piston rod with male thread |                     |
|                                      |                | Part no.                      | Type              | Part no.                    | Type                |
| 16                                   | 5              | 157027                        | AEVULQ-16-5-P-A   | 157073                      | AEVULQ-16-5-A-P-A   |
|                                      | 10             | 157028                        | AEVULQ-16-10-P-A  | 157074                      | AEVULQ-16-10-A-P-A  |
|                                      | 15             | 157029                        | AEVULQ-16-15-P-A  | 157075                      | AEVULQ-16-15-A-P-A  |
|                                      | 20             | 157030                        | AEVULQ-16-20-P-A  | 157076                      | AEVULQ-16-20-A-P-A  |
|                                      | 25             | 157031                        | AEVULQ-16-25-P-A  | 157077                      | AEVULQ-16-25-A-P-A  |
| 20                                   | 5              | 157032                        | AEVULQ-20-5-P-A   | 157078                      | AEVULQ-20-5-A-P-A   |
|                                      | 10             | 157033                        | AEVULQ-20-10-P-A  | 157079                      | AEVULQ-20-10-A-P-A  |
|                                      | 15             | 157034                        | AEVULQ-20-15-P-A  | 157080                      | AEVULQ-20-15-A-P-A  |
|                                      | 20             | 157035                        | AEVULQ-20-20-P-A  | 157081                      | AEVULQ-20-20-A-P-A  |
|                                      | 25             | 157036                        | AEVULQ-20-25-P-A  | 157082                      | AEVULQ-20-25-A-P-A  |
| 25                                   | 5              | 157037                        | AEVULQ-25-5-P-A   | 157083                      | AEVULQ-25-5-A-P-A   |
|                                      | 10             | 157038                        | AEVULQ-25-10-P-A  | 157084                      | AEVULQ-25-10-A-P-A  |
|                                      | 15             | 157039                        | AEVULQ-25-15-P-A  | 157085                      | AEVULQ-25-15-A-P-A  |
|                                      | 20             | 157040                        | AEVULQ-25-20-P-A  | 157086                      | AEVULQ-25-20-A-P-A  |
|                                      | 25             | 157041                        | AEVULQ-25-25-P-A  | 157087                      | AEVULQ-25-25-A-P-A  |
| 32                                   | 5              | 157042                        | AEVULQ-32-5-P-A   | 157088                      | AEVULQ-32-5-A-P-A   |
|                                      | 10             | 157043                        | AEVULQ-32-10-P-A  | 157089                      | AEVULQ-32-10-A-P-A  |
|                                      | 15             | 157044                        | AEVULQ-32-15-P-A  | 157090                      | AEVULQ-32-15-A-P-A  |
|                                      | 20             | 157045                        | AEVULQ-32-20-P-A  | 157091                      | AEVULQ-32-20-A-P-A  |
|                                      | 25             | 157046                        | AEVULQ-32-25-P-A  | 157092                      | AEVULQ-32-25-A-P-A  |
| 40                                   | 5              | 157047                        | AEVULQ-40-5-P-A   | 157093                      | AEVULQ-40-5-A-P-A   |
|                                      | 10             | 157048                        | AEVULQ-40-10-P-A  | 157094                      | AEVULQ-40-10-A-P-A  |
|                                      | 15             | 157049                        | AEVULQ-40-15-P-A  | 157095                      | AEVULQ-40-15-A-P-A  |
|                                      | 20             | 157050                        | AEVULQ-40-20-P-A  | 157096                      | AEVULQ-40-20-A-P-A  |
|                                      | 25             | 157051                        | AEVULQ-40-25-P-A  | 157097                      | AEVULQ-40-25-A-P-A  |
| 50                                   | 10             | 157052                        | AEVULQ-50-10-P-A  | 157098                      | AEVULQ-50-10-A-P-A  |
|                                      | 15             | 157053                        | AEVULQ-50-15-P-A  | 157099                      | AEVULQ-50-15-A-P-A  |
|                                      | 20             | 157054                        | AEVULQ-50-20-P-A  | 157100                      | AEVULQ-50-20-A-P-A  |
|                                      | 25             | 157055                        | AEVULQ-50-25-P-A  | 157101                      | AEVULQ-50-25-A-P-A  |
| 63                                   | 10             | 157056                        | AEVULQ-63-10-P-A  | 157102                      | AEVULQ-63-10-A-P-A  |
|                                      | 15             | 157057                        | AEVULQ-63-15-P-A  | 157103                      | AEVULQ-63-15-A-P-A  |
|                                      | 20             | 157058                        | AEVULQ-63-20-P-A  | 157104                      | AEVULQ-63-20-A-P-A  |
|                                      | 25             | 157059                        | AEVULQ-63-25-P-A  | 157105                      | AEVULQ-63-25-A-P-A  |
| 80                                   | 10             | 157060                        | AEVULQ-80-10-P-A  | 157106                      | AEVULQ-80-10-A-P-A  |
|                                      | 15             | 157061                        | AEVULQ-80-15-P-A  | 157107                      | AEVULQ-80-15-A-P-A  |
|                                      | 20             | 157062                        | AEVULQ-80-20-P-A  | 157108                      | AEVULQ-80-20-A-P-A  |
|                                      | 25             | 157063                        | AEVULQ-80-25-P-A  | 157109                      | AEVULQ-80-25-A-P-A  |
| 100                                  | 10             | 157064                        | AEVULQ-100-10-P-A | 157110                      | AEVULQ-100-10-A-P-A |
|                                      | 15             | 157065                        | AEVULQ-100-15-P-A | 157111                      | AEVULQ-100-15-A-P-A |
|                                      | 20             | 157066                        | AEVULQ-100-20-P-A | 157112                      | AEVULQ-100-20-A-P-A |
|                                      | 25             | 157067                        | AEVULQ-100-25-P-A | 157113                      | AEVULQ-100-25-A-P-A |

## Datasheet – Single-acting, protected against rotation with square piston rod

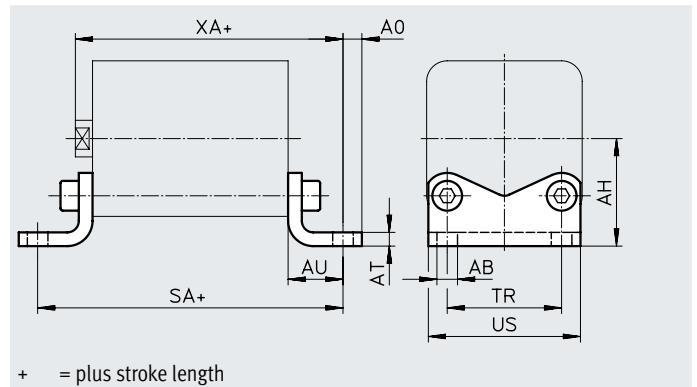
| Ordering data – Variants AEVULQ |          |                               |                       |  |                             |                         |
|---------------------------------|----------|-------------------------------|-----------------------|--|-----------------------------|-------------------------|
| Piston ø                        | Stroke   | Piston rod with female thread |                       |  | Piston rod with male thread |                         |
| [mm]                            | [mm]     | Part no.                      | Type                  |  | Part no.                    | Type                    |
| Variable stroke                 |          |                               |                       |  |                             |                         |
| 16                              | 1 ... 25 | 156321                        | AEVULQ-16-...-P-A     |  | 156361                      | AEVULQ-16-...-A-P-A     |
| 20                              | 1 ... 25 | 156322                        | AEVULQ-20-...-P-A     |  | 156362                      | AEVULQ-20-...-A-P-A     |
| 25                              | 1 ... 25 | 156323                        | AEVULQ-25-...-P-A     |  | 156363                      | AEVULQ-25-...-A-P-A     |
| 32                              | 1 ... 25 | 156324                        | AEVULQ-32-...-P-A     |  | 156364                      | AEVULQ-32-...-A-P-A     |
| 40                              | 1 ... 25 | 156325                        | AEVULQ-40-...-P-A     |  | 156365                      | AEVULQ-40-...-A-P-A     |
| 50                              | 1 ... 25 | 156326                        | AEVULQ-50-...-P-A     |  | 156366                      | AEVULQ-50-...-A-P-A     |
| 63                              | 1 ... 25 | 156327                        | AEVULQ-63-...-P-A     |  | 156367                      | AEVULQ-63-...-A-P-A     |
| 80                              | 1 ... 25 | 156328                        | AEVULQ-80-...-P-A     |  | 156368                      | AEVULQ-80-...-A-P-A     |
| 100                             | 1 ... 25 | 156329                        | AEVULQ-100-...-P-A    |  | 156369                      | AEVULQ-100-...-A-P-A    |
| S2 – Through piston rod         |          |                               |                       |  |                             |                         |
| 16                              | 1 ... 25 | 156331                        | AEVULQ-16-...-P-A-S2  |  | 156371                      | AEVULQ-16-...-A-P-A-S2  |
| 20                              | 1 ... 25 | 156332                        | AEVULQ-20-...-P-A-S2  |  | 156372                      | AEVULQ-20-...-A-P-A-S2  |
| 25                              | 1 ... 25 | 156333                        | AEVULQ-25-...-P-A-S2  |  | 156373                      | AEVULQ-25-...-A-P-A-S2  |
| 32                              | 1 ... 25 | 156334                        | AEVULQ-32-...-P-A-S2  |  | 156374                      | AEVULQ-32-...-A-P-A-S2  |
| 40                              | 1 ... 25 | 156335                        | AEVULQ-40-...-P-A-S2  |  | 156375                      | AEVULQ-40-...-A-P-A-S2  |
| 50                              | 1 ... 25 | 156336                        | AEVULQ-50-...-P-A-S2  |  | 156376                      | AEVULQ-50-...-A-P-A-S2  |
| 63                              | 1 ... 25 | 156337                        | AEVULQ-63-...-P-A-S2  |  | 156377                      | AEVULQ-63-...-A-P-A-S2  |
| 80                              | 1 ... 25 | 156338                        | AEVULQ-80-...-P-A-S2  |  | 156378                      | AEVULQ-80-...-A-P-A-S2  |
| 100                             | 1 ... 25 | 156339                        | AEVULQ-100-...-P-A-S2 |  | 156379                      | AEVULQ-100-...-A-P-A-S2 |

## Accessories

**Foot mounting HUA**  
For piston  $\varnothing$  12 ... 100 mm

**Foot mounting HNC**  
For piston  $\varnothing$  125 mm  
(not illustrated)

Material:  
HUA/HNC: Galvanised steel  
HUA-...-R3: Steel, silver protective coating  
CRHNC: High-alloy stainless steel



| Dimensions and ordering data |                     |      |       |    |    |       |     |     |       |
|------------------------------|---------------------|------|-------|----|----|-------|-----|-----|-------|
| For $\varnothing$            | AB<br>$\varnothing$ | AH   | AO    | AT | AU | SA    | TR  | US  | XA    |
| 12/16                        | 5.5                 | 22   | 4.75  | 3  | 13 | 64    | 18  | 27  | 55.5  |
| 20                           | 6.6                 | 27   | 6.25  | 4  | 16 | 70    | 22  | 34  | 58.5  |
| 25                           | 6.6                 | 29   | 6.25  | 4  | 16 | 71.5  | 26  | 38  | 61    |
| 32                           | 6.6                 | 34   | 8.25  | 5  | 18 | 80.5  | 32  | 48  | 68.5  |
| 40                           | 9                   | 40.5 | 8.25  | 5  | 20 | 85.5  | 42  | 58  | 72    |
| 50                           | 9                   | 47   | 8.25  | 6  | 24 | 93.5  | 50  | 66  | 77    |
| 63                           | 11                  | 56.5 | 11.75 | 6  | 27 | 104   | 62  | 85  | 84.5  |
| 80                           | 11                  | 68.5 | 11.75 | 8  | 30 | 116   | 82  | 105 | 94    |
| 100                          | 13.5                | 81   | 11.75 | 8  | 33 | 132.5 | 103 | 126 | 109.5 |
| 125                          | 16.5                | 90   | 22    | 8  | 45 | 171   | 90  | 131 | 144   |

| For $\varnothing$ | Weight<br>[g] | Basic version     |          |           | Weight<br>[g] | R3 – High corrosion protection |                     |              |
|-------------------|---------------|-------------------|----------|-----------|---------------|--------------------------------|---------------------|--------------|
|                   |               | CRC <sup>1)</sup> | Part no. | Type      |               | CRC <sup>1)</sup>              | Part no.            | Type         |
| 12/16             | 45            | 1                 | 157309   | HUA-12/16 | 45            | 3                              | 176873              | HUA-12/16-R3 |
| 20                | 88            | 1                 | 157310   | HUA-20    | 70            | 3                              | 176874              | HUA-20-R3    |
| 25                | 94            | 1                 | 157311   | HUA-25    | 76            | 3                              | 176875              | HUA-25-R3    |
| 32                | 171           | 1                 | 157312   | HUA-32    | 175           | 3                              | 176876              | HUA-32-R3    |
| 40                | 220           | 1                 | 157313   | HUA-40    | 224           | 3                              | 176877              | HUA-40-R3    |
| 50                | 344           | 1                 | 157314   | HUA-50    | 352           | 3                              | 176878              | HUA-50-R3    |
| 63                | 581           | 1                 | 157315   | HUA-63    | 593           | 3                              | 176879              | HUA-63-R3    |
| 80                | 878           | 1                 | 157316   | HUA-80    | 902           | 3                              | 176880              | HUA-80-R3    |
| 100               | 1117          | 1                 | 157317   | HUA-100   | 1128          | 3                              | 176881              | HUA-100-R3   |
|                   |               | Basic version     |          |           |               |                                | Corrosion resistant |              |
| 125               | 1840          | 2                 | 174375   | HNC-125   | 1840          | 4                              | 176943              | CRHNC-125    |

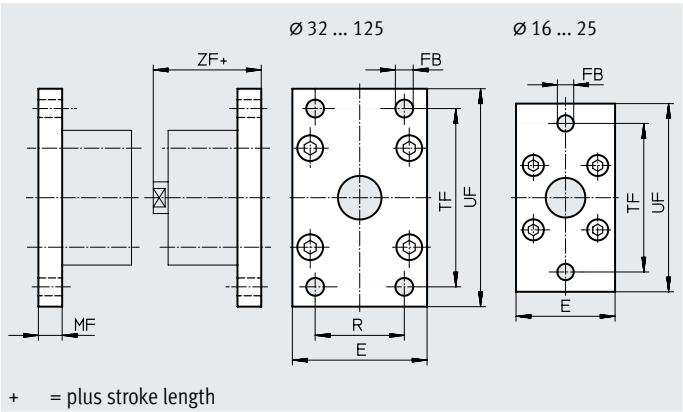
- 1) Corrosion resistance class CRC 1 to Festo standard FN 940070  
 Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts that are covered in the application (e.g. drive trunnions).  
 Corrosion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

Accessories

Flange mounting FUA  
For piston  $\varnothing$  12 ... 100 mm

Flange mounting FNC  
For piston  $\varnothing$  125 mm  
(not illustrated)

Material:  
FUA: Wrought aluminium alloy  
FNC: Galvanised steel  
RoHS-compliant



| Dimensions and ordering data |     |                     |    |    |     |     |
|------------------------------|-----|---------------------|----|----|-----|-----|
| For $\varnothing$            | E   | FB<br>$\varnothing$ | MF | R  | TF  | UF  |
| 12/16                        | 29  | 5.5                 | 10 | –  | 43  | 55  |
| 20                           | 36  | 6.6                 | 10 | –  | 55  | 70  |
| 25                           | 40  | 6.6                 | 10 | –  | 60  | 76  |
| 32                           | 50  | 7                   | 10 | 32 | 65  | 80  |
| 40                           | 60  | 9                   | 10 | 36 | 82  | 102 |
| 50                           | 68  | 9                   | 12 | 45 | 90  | 110 |
| 63                           | 87  | 9                   | 15 | 50 | 110 | 130 |
| 80                           | 107 | 12                  | 15 | 63 | 135 | 160 |
| 100                          | 128 | 14                  | 15 | 75 | 163 | 190 |
| 125                          | 132 | 16                  | 20 | 90 | 180 | 210 |

| For $\varnothing$ | ZF   | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type      |
|-------------------|------|-------------------|---------------|----------|-----------|
| 12/16             | 52.5 | 2                 | 48            | 157299   | FUA-12/16 |
| 20                | 52.5 | 2                 | 77            | 157300   | FUA-20    |
| 25                | 55   | 2                 | 91            | 157301   | FUA-25    |
| 32                | 60.5 | 2                 | 290           | 157302   | FUA-32    |
| 40                | 62   | 2                 | 449           | 157303   | FUA-40    |
| 50                | 65   | 2                 | 658           | 157304   | FUA-50    |
| 63                | 72.5 | 2                 | 1277          | 157305   | FUA-63    |
| 80                | 76   | 2                 | 1910          | 157306   | FUA-80    |
| 100               | 91.5 | 2                 | 2716          | 157307   | FUA-100   |
| 125               | 119  | 1                 | 3775          | 174382   | FNC-125   |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070  
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, 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

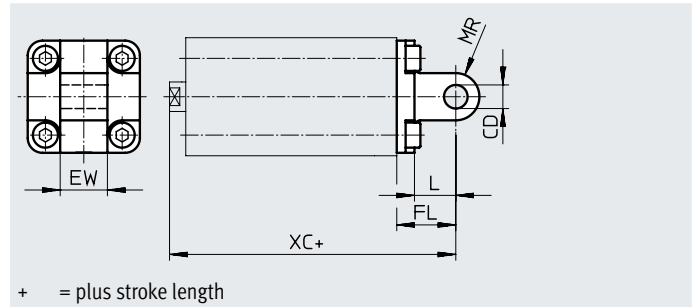
### Swivel flange SUA

For piston  $\varnothing$  12 ... 25 mm

Material:

SUA: Anodised aluminium

SUA- ... -R3: Aluminium, silver protective coating

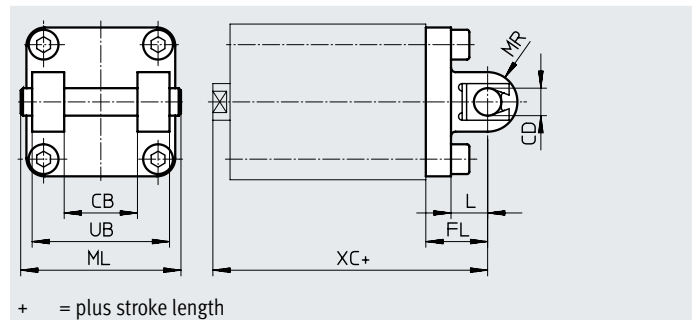


For piston  $\varnothing$  32 ... 100 mm

Material:

SUA: Anodised aluminium

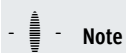
SUA- ... -R3: Aluminium, silver protective coating



#### Dimensions and ordering data

| For $\varnothing$ | CB | CD<br>$\varnothing$ | EW | FL | L  | ML  | MR | UB  | XC    |
|-------------------|----|---------------------|----|----|----|-----|----|-----|-------|
| 12/16             | –  | 6                   | 12 | 16 | 10 | –   | 6  | –   | 58.5  |
| 20                | –  | 8                   | 16 | 20 | 14 | –   | 8  | –   | 62.5  |
| 25                | –  | 8                   | 16 | 20 | 14 | –   | 8  | –   | 65    |
| 32                | 26 | 10                  | –  | 22 | 13 | 54  | 10 | 45  | 72.5  |
| 40                | 28 | 12                  | –  | 25 | 16 | 62  | 12 | 52  | 77    |
| 50                | 32 | 12                  | –  | 27 | 16 | 70  | 12 | 60  | 80    |
| 63                | 40 | 16                  | –  | 32 | 21 | 82  | 16 | 70  | 89.5  |
| 80                | 50 | 16                  | –  | 36 | 23 | 102 | 16 | 90  | 100   |
| 100               | 60 | 20                  | –  | 41 | 26 | 126 | 20 | 110 | 117.5 |

| For $\varnothing$ | Weight<br>[g] | Basic version |           | Weight<br>[g] | R3 – High corrosion protection |              |
|-------------------|---------------|---------------|-----------|---------------|--------------------------------|--------------|
|                   |               | Part no.      | Type      |               | Part no.                       | Type         |
| 12/16             | 22            | 157319        | SUA-12/16 | 22            | 176883                         | SUA-12/16-R3 |
| 20                | 41            | 157320        | SUA-20    | 41            | 176884                         | SUA-20-R3    |
| 25                | 45            | 157321        | SUA-25    | 45            | 176885                         | SUA-25-R3    |
| 32                | 137           | 157322        | SUA-32    | 135           | 176886                         | SUA-32-R3    |
| 40                | 199           | 157323        | SUA-40    | 194           | 176887                         | SUA-40-R3    |
| 50                | 287           | 157324        | SUA-50    | 283           | 176888                         | SUA-50-R3    |
| 63                | 530           | 157325        | SUA-63    | 527           | 176889                         | SUA-63-R3    |
| 80                | 763           | 157326        | SUA-80    | 770           | 176890                         | SUA-80-R3    |
| 100               | 1283          | 157327        | SUA-100   | 1234          | 176891                         | SUA-100-R3   |



#### Note

The maximum stroke length must not be exceeded when combining cylinders and swivel flanges.

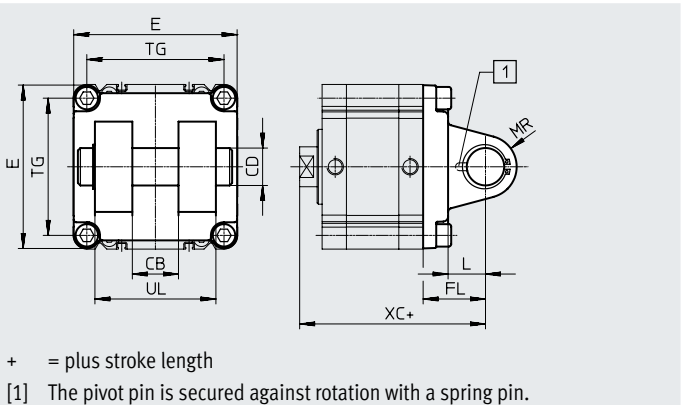
| For $\varnothing$ | Max. stroke length [mm] |
|-------------------|-------------------------|
| 12                | 50                      |
| 16                | 50                      |
| 20                | 50                      |
| 25                | 50                      |
| 32                | 100                     |

| For $\varnothing$ | Max. stroke length [mm] |
|-------------------|-------------------------|
| 40                | 100                     |
| 50                | 100                     |
| 63                | 100                     |
| 80                | 150                     |
| 100               | 150                     |

Accessories

Swivel flange SNC-125  
For piston Ø 125 mm

Material:  
Die-cast aluminium  
RoHS-compliant

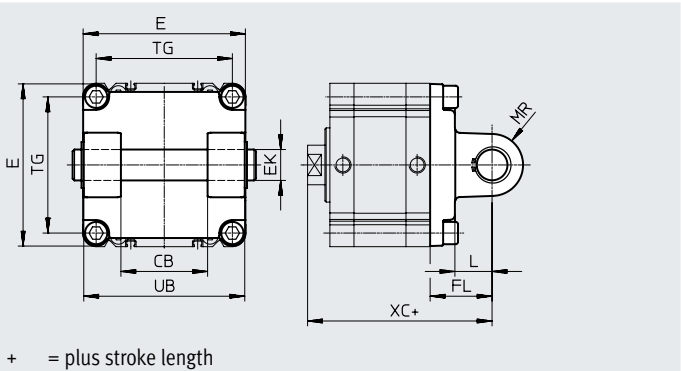


| Ordering data |     |         |      |      |    |    |     |     |     |                   |        |                           |         |
|---------------|-----|---------|------|------|----|----|-----|-----|-----|-------------------|--------|---------------------------|---------|
| For Ø         | CB  | CD<br>Ø | E    | FL   | L  | MR | TG  | UL  | XC  | CRC <sup>1)</sup> | Weight | Basic version<br>Part no. | Type    |
|               | H14 | H9      | −0.8 | ±0.2 |    |    |     | h14 |     |                   | [g]    |                           |         |
| 125           | 37  | 30      | 131  | 50   | 30 | 25 | 110 | 97  | 149 | 1                 | 1740   | 174389                    | SNC-125 |

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

Swivel flange SNCB-125  
For piston Ø 125 mm

Material:  
SNCB-125: Die-cast aluminium  
SNCB-125-R3: Die-cast aluminium  
with protective coating  
RoHS-compliant



| Ordering data |     |      |         |      |    |      |     |     |     |  |
|---------------|-----|------|---------|------|----|------|-----|-----|-----|--|
| For Ø         | CB  | E    | EK<br>Ø | FL   | L  | MR   | TG  | UB  | XC  |  |
| [mm]          | H14 | −0.8 | H9/e8   | ±0.2 |    | −0.5 |     | h14 |     |  |
| 125           | 70  | 131  | 25      | 50   | 30 | 25   | 110 | 130 | 149 |  |

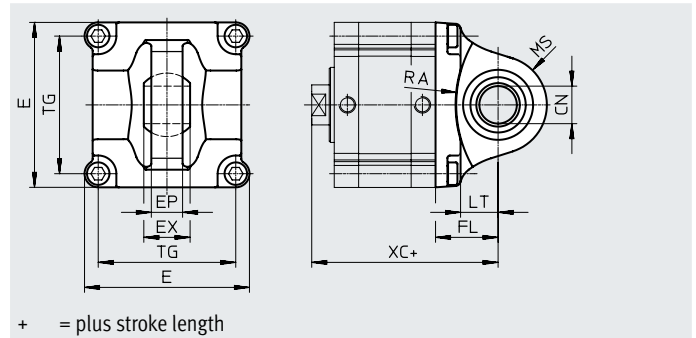
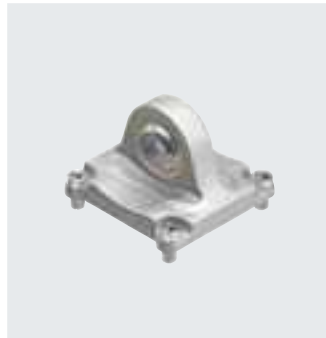
| For Ø | Basic version     |               |          |          | R3 – High corrosion protection |               |          |             |
|-------|-------------------|---------------|----------|----------|--------------------------------|---------------|----------|-------------|
|       | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type     | CRC <sup>1)</sup>              | Weight<br>[g] | Part no. | Type        |
| [mm]  |                   |               |          |          |                                |               |          |             |
| 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 internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, 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.

## Accessories

### Swivel flange SNCS-125 For piston $\varnothing$ 125 mm

Material:  
SNCS-125: Wrought aluminium alloy  
SNCS-125-R3: Wrought aluminium  
alloy with protective coating  
RoHS-compliant



#### Dimensions and ordering data

| For $\varnothing$ | CN<br>$\varnothing$ |                      | E                |                  | EP        | EX | FL        |
|-------------------|---------------------|----------------------|------------------|------------------|-----------|----|-----------|
|                   | ADVU-...            | ADVU-...-R3          | ADVU-...         | ADVU-...-R3      | $\pm 0.2$ |    | $\pm 0.2$ |
| 125               | 30 $^{+0.018}$      | 30 $^{+0.021/-0.04}$ | 132 $^{+1/-0.7}$ | 132 $^{+1/-0.7}$ | 25        | 37 | 50        |

| For $\varnothing$ | LT | MS           |              | RA             |                   | TG  | XC  |
|-------------------|----|--------------|--------------|----------------|-------------------|-----|-----|
|                   |    | ADVU-...     | ADVU-...-R3  | ADVU-...<br>+1 | ADVU-...-R3<br>+1 |     |     |
| 125               | 30 | 39 $\pm 0.5$ | 39 $\pm 0.5$ | 100            | 100               | 110 | 149 |

#### Basic version

|                   |                   |               |          |          | R3 – High corrosion protection |               |          |             |
|-------------------|-------------------|---------------|----------|----------|--------------------------------|---------------|----------|-------------|
| For $\varnothing$ | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type     | CRC <sup>1)</sup>              | Weight<br>[g] | Part no. | Type        |
| 125               | 2                 | 1369          | 174403   | SNCS-125 | 3                              | 1369          | 2895926  | SNCS-125-R3 |

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

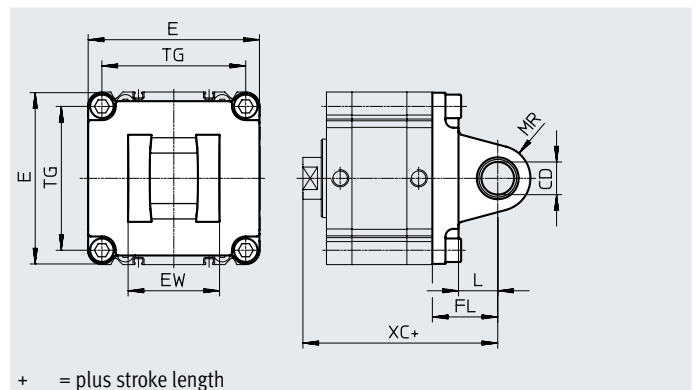
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with the normal surrounding industrial environment.

Corrosion resistance class CRC 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 SNCL-125 For piston $\varnothing$ 125 mm

Material:  
Die-cast aluminium  
RoHS-compliant



#### Ordering data

| For $\varnothing$ | CD<br>$\varnothing$<br>H9 | E   | EW | FL | L  | MR | TG  | XC  | CRC <sup>1)</sup> | Weight<br>[g] | Basic version |          |
|-------------------|---------------------------|-----|----|----|----|----|-----|-----|-------------------|---------------|---------------|----------|
|                   |                           |     |    |    |    |    |     |     |                   |               | Part no.      | Type     |
| 125               | 25                        | 131 | 70 | 50 | 30 | 25 | 110 | 149 | 1                 | 1135          | 174410        | SNCL-125 |

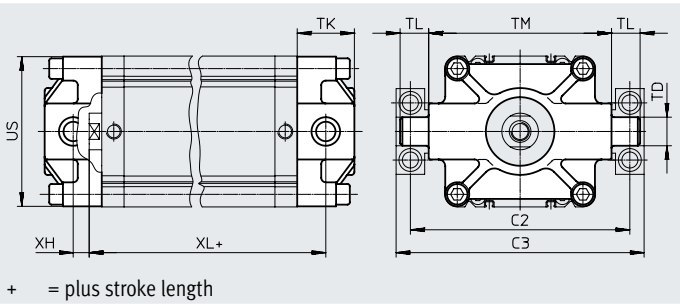
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

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

Accessories

Trunnion flange ZNCF-125  
For piston  $\varnothing$  125 mm

Material:  
High-alloy stainless steel  
RoHS-compliant

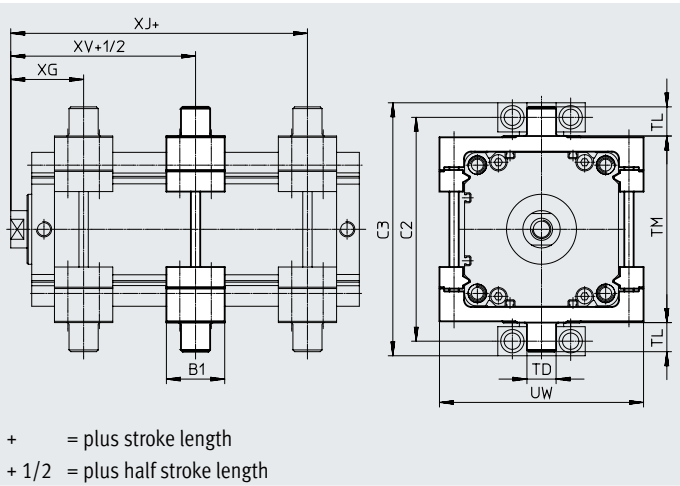
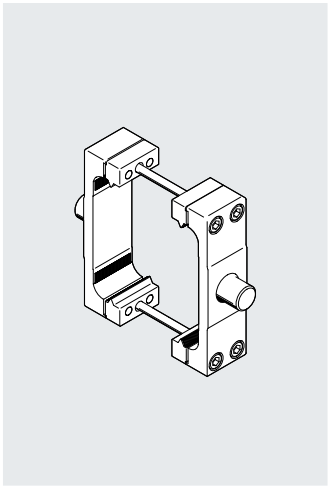


| Ordering data     |     |     |                           |            |                 |           |     |    |     |               |  | Basic version |          |
|-------------------|-----|-----|---------------------------|------------|-----------------|-----------|-----|----|-----|---------------|--|---------------|----------|
| For $\varnothing$ | C2) | C3) | TD<br>$\varnothing$<br>e9 | TK<br>max. | TL<br>+0.5/-0.7 | TM<br>h14 | US  | XH | XL  | Weight<br>[g] |  | Part no.      | Type     |
| 125               | 192 | 217 | 25                        | 50         | 24.5            | 160       | 131 | 14 | 124 | 3484          |  | 174417        | ZNCF-125 |

Trunnion mounting kit  
DAMT-V7-125-A  
For piston  $\varnothing$  125 mm

Material:  
Galvanised steel  
RoHS-compliant

 **Note**  
The trunnion mounting kit can be attached to the cylinder profile barrel at any position.



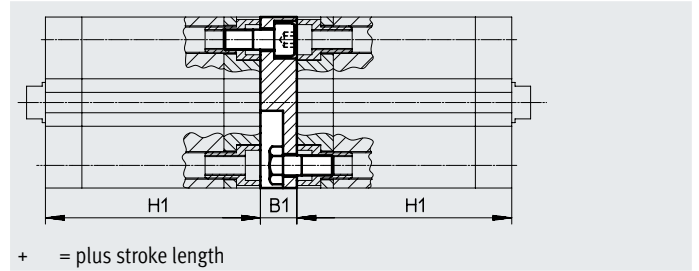
| Ordering data |     |     |    |               |    |     |     |      |      |      |                   |               | Basic version |               |
|---------------|-----|-----|----|---------------|----|-----|-----|------|------|------|-------------------|---------------|---------------|---------------|
| For Ø         | C1) | C2) | B1 | TD<br>Ø<br>e9 | TL | TM  | UW  | XG   | XV   | XJ   | CRC <sup>1)</sup> | Weight<br>[g] | Part no.      | Type          |
| 125           | 217 | 192 | 50 | 25            | 25 | 160 | 175 | 62.5 | 58.5 | 54.5 | 1                 | 3013          | 163531        | DAMT-V7-125-A |

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

## Accessories

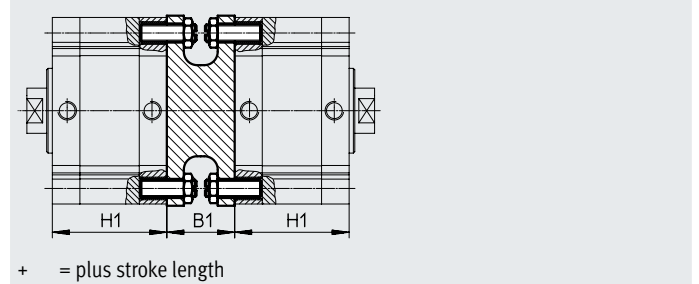
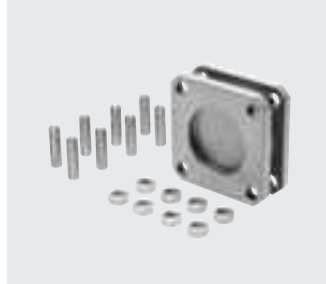
### Multi-position kit DPVU For piston $\varnothing$ 12 ... 100 mm

Material:  
Wrought aluminium alloy  
RoHS-compliant



### Multi-position kit DPNC For piston $\varnothing$ 125 mm

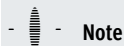
Material:  
Flange: Wrought aluminium alloy  
Threaded pins, hex nuts: Galvanised steel



| Dimensions and ordering data |      |      |                                       |                   |               |          |            |
|------------------------------|------|------|---------------------------------------|-------------------|---------------|----------|------------|
| For Ø                        | B1   | H    | Max.<br>overall stroke length<br>[mm] | CRC <sup>1)</sup> | Weight<br>[g] | Part no. | Type       |
| 12/16                        | 12.5 | 38   | 400                                   | 2                 | 35            | 161194   | DPVU-12/16 |
| 20                           | 12.5 | 38   |                                       |                   | 54            | 161195   | DPVU-20    |
| 25                           | 13   | 39.5 |                                       |                   | 65            | 161196   | DPVU-25    |
| 32                           | 14.5 | 44.5 | 600                                   |                   | 111           | 161197   | DPVU-32    |
| 40                           | 14.5 | 45.5 |                                       |                   | 155           | 161198   | DPVU-40    |
| 50                           | 14.5 | 45.5 |                                       |                   | 212           | 161199   | DPVU-50    |
| 63                           | 14.5 | 50   |                                       |                   | 372           | 161200   | DPVU-63    |
| 80                           | 16.5 | 56   | 800                                   |                   | 580           | 161201   | DPVU-80    |
| 100                          | 19.5 | 66.5 |                                       |                   | 935           | 161202   | DPVU-100   |
| 125                          | 48   | 81   | 1000                                  |                   | 2102          | 174424   | DPNC-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.



#### Note

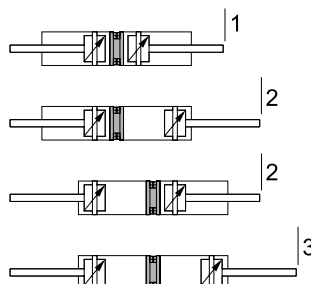
The maximum total stroke length must not be exceeded when combining cylinders and multi-position kits.

### Connecting two cylinders with identical piston diameters to form a 3- or 4-position cylinder

A 3- or 4-position cylinder consists of two separate cylinders whose piston rods advance in opposite directions. This means that depending on actuation and stroke configuration, this type of cylinder can assume up to four positions. In each case the cylinder is driven precisely against a stop.

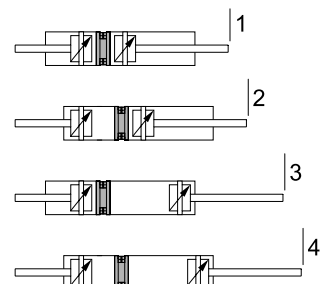
#### To achieve 3 positions

Two cylinders with the same stroke length must be connected to each other.



#### To achieve 4 positions

Two cylinders with different stroke lengths must be connected to each other.



## Accessories

Ordering data – Mounting components

Designation

For ø

Part no.

Type

Clevis foot LBN



12

6058

LBN-12/16

16

6058

LBN-12/16

20

6059

LBN-20/25

25

6059

LBN-20/25

Clevis foot LN



32

5147

LN-32

40

5148

LN-40

50

5149

LN-50

63

5150

LN-63

80

5151

LN-80

100

5152

LN-100

125

9036

LN-125

Clevis foot LBG



20, 25, 32, 40

31761

LBG-32

50, 63

31762

LBG-40

80

31763

LBG-50

31764

LBG-63

100

31765

LBG-80

31766

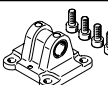
LBG-100

125

31767

LBG-125

Swivel flange SNCL



32

174404

SNCL-32

40

174405

SNCL-40

50

174406

SNCL-50

63

174407

SNCL-63

80

174408

SNCL-80

100

174409

SNCL-100

125

174410

SNCL-125

Clevis foot LNG



32

33890

LNG-32

40

33891

LNG-40

50

33892

LNG-50

63

33893

LNG-63

80

33894

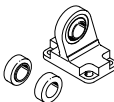
LNG-80

100

33895

LNG-100

Clevis foot LSN



32

5561

LSN-32

40

5562

LSN-40

50

5563

LSN-50

63

5564

LSN-63

80

5565

LSN-80

100

5566

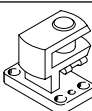
LSN-100

125

6987

LSN-125

Right-angle clevis foot LQG



20, 25, 32, 40

31768

LQG-32

50, 63

31769

LQG-40

80

31770

LQG-50

31771

LQG-63

100

31772

LQG-80

31773

LQG-100

125

31774

LQG-125

Clevis foot LSNSG



125

31753

LSNSG-125

Trunnion support LNZG



125

32962

LNZG-100/125

Datasheets → Internet: clevis foot

## Accessories

## Ordering data – Mounting components, corrosion and acid resistant

| Designation                                                                       | For ø | Part no. | Type           |
|-----------------------------------------------------------------------------------|-------|----------|----------------|
| <b>Clevis foot CRLBN</b>                                                          |       |          |                |
|  | 12    | 161862   | CRLBN-12/16    |
|                                                                                   | 16    | 161862   | CRLBN-12/16    |
|                                                                                   | 20    | 161863   | CRLBN-20/25    |
|                                                                                   | 25    | 161863   | CRLBN-20/25    |
| <b>Trunnion support CRLNZG</b>                                                    |       |          |                |
|  | 125   | 161877   | CRLNZG-100/125 |
|                                                                                   |       |          |                |

Datasheets → Internet: clevis foot

| Designation                                                                       | For ø | Part no. | Type      |
|-----------------------------------------------------------------------------------|-------|----------|-----------|
| <b>Clevis foot CRLNG</b>                                                          |       |          |           |
|  | 32    | 161840   | CRLNG-32  |
|                                                                                   | 40    | 161841   | CRLNG-40  |
|                                                                                   | 50    | 161842   | CRLNG-50  |
|                                                                                   | 63    | 161843   | CRLNG-63  |
|                                                                                   | 80    | 161844   | CRLNG-80  |
|                                                                                   | 100   | 161845   | CRLNG-100 |

## Ordering data – Mounting components, R3 – high corrosion protection

| Designation                                                                       | For ø          | Part no. | Type       |
|-----------------------------------------------------------------------------------|----------------|----------|------------|
| <b>Clevis foot LBG-R3</b>                                                         |                |          |            |
|  | 20, 25, 32, 40 | 2078790  | LBG-32-R3  |
|                                                                                   | 50, 63         | 2078792  | LBG-40-R3  |
|                                                                                   | 80             | 2078794  | LBG-50-R3  |
|                                                                                   |                | 2078795  | LBG-63-R3  |
|                                                                                   | 100            | 2078797  | LBG-80-R3  |
|                                                                                   |                | 2078799  | LBG-100-R3 |
|                                                                                   | 125            | 2078837  | LBG-125-R3 |

Datasheets → Internet: clevis foot

## Accessories

## Ordering data – Piston rod attachments

| Designation                                                                        | For ø | Part no. | Type            |
|------------------------------------------------------------------------------------|-------|----------|-----------------|
| <b>Rod eye SGS</b>                                                                 |       |          |                 |
|    | 12    | 9254     | SGS-M6          |
|                                                                                    | 16    | 9255     | SGS-M8          |
|                                                                                    | 20    | 9261     | SGS-M10x1.25    |
|                                                                                    | 25    |          |                 |
|                                                                                    | 32    |          |                 |
|                                                                                    | 40    |          |                 |
|                                                                                    | 50    | 9262     | SGS-M12x1.25    |
|                                                                                    | 63    |          |                 |
|                                                                                    | 80    | 9263     | SGS-M16x1.5     |
|                                                                                    | 100   | 9264     | SGS-M20x1.5     |
|                                                                                    | 125   | 10774    | SGS-M27x2       |
| <b>Rod clevis SG</b>                                                               |       |          |                 |
|    | 12    | 3110     | SG-M6           |
|                                                                                    | 16    | 3111     | SG-M8           |
|                                                                                    | 20    | 6144     | SG-M10x1.25     |
|                                                                                    | 25    |          |                 |
|                                                                                    | 32    |          |                 |
|                                                                                    | 40    |          |                 |
|                                                                                    | 50    | 6145     | SG-M12x1.25     |
|                                                                                    | 63    |          |                 |
|  | 80    | 6146     | SG-M16x1.5      |
|                                                                                    | 100   | 6147     | SG-M20x1.5      |
|                                                                                    | 125   | 14987    | SG-M27x2-B      |
| <b>Coupling piece KSG</b>                                                          |       |          |                 |
|  | 12    | -        | -               |
|                                                                                    | 16    |          |                 |
|                                                                                    | 20    | 32963    | KSG-M10x1.25    |
|                                                                                    | 25    |          |                 |
|                                                                                    | 32    |          |                 |
|                                                                                    | 40    |          |                 |
|                                                                                    | 50    | 32964    | KSG-M12x1.25    |
|                                                                                    | 63    |          |                 |
|                                                                                    | 80    | 32965    | KSG-M16x1.5     |
|                                                                                    | 100   | 32966    | KSG-M20x1.5     |
|                                                                                    | 125   | 32967    | KSG-M27x2       |
| <b>Adapter AD</b>                                                                  |       |          |                 |
|  | 12    | 157328   | AD-M6-M5        |
|                                                                                    |       | 157329   | AD-M6-1/8       |
|                                                                                    |       | 157330   | AD-M6-1/4       |
|                                                                                    | 16    | 157331   | AD-M8-1/8       |
|                                                                                    |       | 157332   | AD-M8-1/4       |
|                                                                                    |       |          |                 |
|                                                                                    | 20    | 157333   | AD-M10x1.25-1/8 |
|                                                                                    | 25    | 157334   | AD-M10x1.25-1/4 |
|                                                                                    | 32    |          |                 |
|                                                                                    | 40    |          |                 |
|                                                                                    | 50    | 160256   | AD-M12x1.25-1/4 |
|                                                                                    | 63    | 160257   | AD-M12x1.25-3/8 |

Datasheets → Internet: piston rod attachment

| Designation                                                                         | For ø | Part no. | Type         |
|-------------------------------------------------------------------------------------|-------|----------|--------------|
| <b>Rod clevis SGA</b>                                                               |       |          |              |
|    | 12    | -        | -            |
|                                                                                     | 16    |          |              |
|                                                                                     | 20    | 32954    | SGA-M10x1.25 |
|                                                                                     | 25    |          |              |
|                                                                                     | 32    |          |              |
|                                                                                     | 40    |          |              |
|                                                                                     | 50    | 10767    | SGA-M12x1.25 |
|                                                                                     | 63    |          |              |
|                                                                                     | 80    | 10768    | SGA-M16x1.5  |
|                                                                                     | 100   | 10769    | SGA-M20x1.5  |
|                                                                                     | 125   | 10770    | SGA-M27x2    |
| <b>Self-aligning rod coupler FK</b>                                                 |       |          |              |
|    | 12    | 2061     | FK-M6        |
|                                                                                     | 16    | 2062     | FK-M8        |
|                                                                                     | 20    | 6140     | FK-M10x1.25  |
|                                                                                     | 25    |          |              |
|                                                                                     | 32    |          |              |
|                                                                                     | 40    |          |              |
|                                                                                     | 50    | 6141     | FK-M12x1.25  |
|                                                                                     | 63    |          |              |
|                                                                                     | 80    | 6142     | FK-M16x1.5   |
|                                                                                     | 100   | 6143     | FK-M20x1.5   |
|                                                                                     | 125   | 10485    | FK-M27x2     |
| <b>Coupling piece KSZ</b>                                                           |       |          |              |
|  | 12    | 36123    | KSZ-M6       |
|                                                                                     | 16    | 36124    | KSZ-M8       |
|                                                                                     | 20    | 36125    | KSZ-M10x1.25 |
|                                                                                     | 25    |          |              |
|                                                                                     | 32    |          |              |
|                                                                                     | 40    |          |              |
|                                                                                     | 50    | 36126    | KSZ-M12x1.25 |
|                                                                                     | 63    |          |              |
|                                                                                     | 80    | 36127    | KSZ-M16x1.5  |
|                                                                                     | 100   | 36128    | KSZ-M20x1.5  |
|                                                                                     | 125   | -        | -            |

## Accessories

## Ordering data – Piston-rod attachments, corrosion-resistant

| Designation                                                                       | For ø | Part no. | Type           |
|-----------------------------------------------------------------------------------|-------|----------|----------------|
| <b>Rod eye CRSGS</b>                                                              |       |          |                |
|  | 12    | 195580   | CRSGS-M6       |
|                                                                                   | 16    | 195581   | CRSGS-M8       |
|                                                                                   | 20    | 195582   | CRSGS-M10x1.25 |
|                                                                                   | 25    |          |                |
|                                                                                   | 32    |          |                |
|                                                                                   | 40    |          |                |
|                                                                                   | 50    | 195583   | CRSGS-M12x1.25 |
|                                                                                   | 63    |          |                |
|                                                                                   | 80    | 195584   | CRSGS-M16x1.5  |
|                                                                                   | 100   | 195585   | CRSGS-M20x1.5  |
|                                                                                   | 125   | 195586   | CRSGS-M27x2    |
| <b>Self-aligning rod coupler CRFK</b>                                             |       |          |                |
|  | 20    | 2305778  | CRFK-M10x1.25  |
|                                                                                   | 25    |          |                |
|                                                                                   | 32    |          |                |
|                                                                                   | 40    |          |                |
|                                                                                   | 50    | 2305779  | CRFK-M12x1.25  |
|                                                                                   | 63    |          |                |
|                                                                                   | 80    | 2490673  | CRFK-M16x1.5   |
|                                                                                   | 100   | 2545677  | CRFK-M20x1.5   |

Datasheets → Internet: piston rod attachment

| Designation                                                                       | For ø | Part no. | Type          |
|-----------------------------------------------------------------------------------|-------|----------|---------------|
| <b>Rod clevis CRSG</b>                                                            |       |          |               |
|  | 12    | 13567    | CRSG-M6       |
|                                                                                   | 16    | 13568    | CRSG-M8       |
|                                                                                   | 20    | 13569    | CRSG-M10x1.25 |
|                                                                                   | 25    |          |               |
|                                                                                   | 32    |          |               |
|                                                                                   | 40    |          |               |
|                                                                                   | 50    | 13570    | CRSG-M12x1.25 |
|                                                                                   | 63    |          |               |
|                                                                                   | 80    | 13571    | CRSG-M16x1.5  |
|                                                                                   | 100   | 13572    | CRSG-M20x1.5  |
|                                                                                   | 125   | 185361   | CRSG-M27x2    |

## Ordering data – One-way flow control valves

Datasheets → Internet: grl

|                                                                                     | Port   |                 | Material     | Part no. | Type             |  |  |
|-------------------------------------------------------------------------------------|--------|-----------------|--------------|----------|------------------|--|--|
|                                                                                     | Thread | For tubing O.D. |              |          |                  |  |  |
| For exhaust air                                                                     |        |                 |              |          |                  |  |  |
|  | M5     | 3               | Metal design | 193137   | GRLA-M5-QS-3-D   |  |  |
|                                                                                     |        | 4               |              | 193138   | GRLA-M5-QS-4-D   |  |  |
|                                                                                     |        | 6               |              | 193139   | GRLA-M5-QS-6-D   |  |  |
|                                                                                     | G1/8   | 3               |              | 193142   | GRLA-1/8-QS-3-D  |  |  |
|                                                                                     |        | 4               |              | 193143   | GRLA-1/8-QS-4-D  |  |  |
|                                                                                     |        | 6               |              | 193144   | GRLA-1/8-QS-6-D  |  |  |
|                                                                                     | G1/4   | 8               |              | 193145   | GRLA-1/8-QS-8-D  |  |  |
|                                                                                     |        | 6               |              | 193146   | GRLA-1/4-QS-6-D  |  |  |
|                                                                                     |        | 8               |              | 193147   | GRLA-1/4-QS-8-D  |  |  |
|                                                                                     |        | 10              |              | 193148   | GRLA-1/4-QS-10-D |  |  |
|                                                                                     |        |                 |              |          |                  |  |  |
|                                                                                     |        |                 |              |          |                  |  |  |
| For supply air                                                                      |        |                 |              |          |                  |  |  |
|  | M5     | 3               | Metal design | 193153   | GRLZ-M5-QS-3-D   |  |  |
|                                                                                     |        | 4               |              | 193154   | GRLZ-M5-QS-4-D   |  |  |
|                                                                                     |        | 6               |              | 193155   | GRLZ-M5-QS-6-D   |  |  |
|                                                                                     | G1/8   | 3               |              | 193156   | GRLZ-1/8-QS-3-D  |  |  |
|                                                                                     |        | 4               |              | 193157   | GRLZ-1/8-QS-4-D  |  |  |
|                                                                                     |        | 6               |              | 193158   | GRLZ-1/8-QS-6-D  |  |  |
|                                                                                     |        | 8               |              | 193159   | GRLZ-1/8-QS-8-D  |  |  |
|                                                                                     |        |                 |              |          |                  |  |  |
|                                                                                     |        |                 |              |          |                  |  |  |

## Accessories

## Ordering data – Proximity switch for T-slot, magneto-resistive

Datasheets → Internet: smt

| Ordering data                                                                    | 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 |
|                                                                                  |                                                                                |                  | 1x M12 plug, 3-pin    | 0.3              | 574337   | SMT-8M-A-PS-24V-E-0.3-M12 |
|                                                                                  |                                                                                | NPN              | Cable, 3-core         | 2.5              | 574338   | SMT-8M-A-NS-24V-E-2.5-OE  |
|                                                                                  |                                                                                |                  | Plug M8x1, 3-pin      | 0.3              | 574339   | SMT-8M-A-NS-24V-E-0.3-M8D |
| 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  |

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

Datasheets → Internet: sme

| Ordering data                                                                      | 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 | Contacting       | Cable, 3-core         | 2.5              | 543862   | SME-8M-DS-24V-K-2.5-OE  |
|                                                                                    |                                                                  |                  |                       | 5.0              | 543863   | SME-8M-DS-24V-K-5.0-OE  |
|                                                                                    |                                                                  |                  | Cable, 2-core         | 2.5              | 543872   | SME-8M-ZS-24V-K-2.5-OE  |
|                                                                                    |                                                                  |                  | Plug M8x1, 3-pin      | 0.3              | 543861   | SME-8M-DS-24V-K-0.3-M8D |
|   | Inserted in the slot lengthwise, flush with the cylinder profile | Contacting       | Cable, 3-core         | 2.5              | 150855   | SME-8-K-LED-24          |
|                                                                                    |                                                                  |                  | Plug M8x1, 3-pin      | 0.3              | 150857   | SME-8-S-LED-24          |
|                                                                                    |                                                                  |                  |                       |                  |          |                         |
| N/C                                                                                |                                                                  |                  |                       |                  |          |                         |
|  | Inserted in the slot lengthwise, flush with the cylinder profile | Contacting       | Cable, 3-core         | 7.5              | 160251   | SME-8-O-K-LED-24        |
|                                                                                    |                                                                  |                  |                       |                  |          |                         |

## 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  |
|                                                                                    |                               |                              | 5.0              | 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 |
|                                                                                    |                               |                              | 5.0              | 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  |
|                                                                                    |                               |                              | 5.0              | 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 |
|                                                                                    |                               |                              | 5.0              | 541370   | NEBU-M12W5-K-5-LE3   |

## Ordering data – Slot cover for T-slot

|                                                                                    | Mounting   | Length   | Part no. | Type    |
|------------------------------------------------------------------------------------|------------|----------|----------|---------|
|  | Insertable | 2x 0.5 m | 151680   | ABP-5-S |