

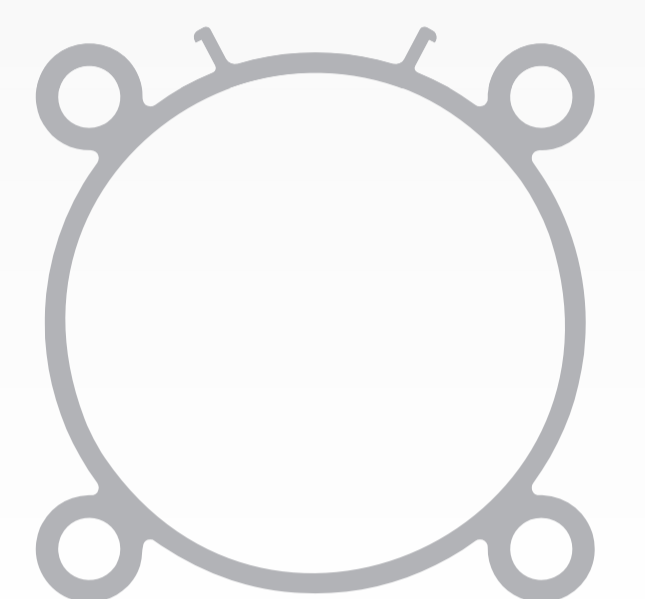
KL

Ø 32 ÷ 125 mm - ISO 15552 Pneumatic cylinders

- New design of the profile for easier cleaning
- Grooves for recessed sensors and connections on one side for easy installation
- Traditional UNIVER technology to ensure strength and reliability
- Dimensions complying with international standards for a full interchangeability

Available ATEX version upon request

CE  II 2Gc IIC T5 II 2Dc T100°C



TECHNICAL CHARACTERISTICS

| | |
|---------------------|--|
| Working temperature | -20 ÷ 80 °C |
| Fluid | filtered air, with or without lubrication |
| Working pressure | 1,5 ÷ 10 bar |
| Bores | Ø 032 - 040 - 050 - 063 - 080 - 100 - 125 mm |
| Cushionings | adjustable in both sides |

CONSTRUCTIVE CHARACTERISTICS

| | |
|---------------------------|---|
| End-caps | die-cast aluminium (painted) |
| Barrel | anodized aluminium |
| Piston | die-cast aluminium |
| Guide slide | acetalic resin |
| Piston rod | chromium-plated steel standard, stainless steel, rolled AISI 303 |
| Piston seal | double-lip seal in nitrile rubber (NBR) |
| Guide bush for piston rod | UNIVER Original self-lubricating and self-aligning |
| Shock absorber seals | nitrile rubber (NBR) in both sides |
| Magnet | plasto-ferrite (standard supplied) |

CODIFICATION KEY

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|--|---|--|
| K | L | 2 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 5 | 0 | | M | |
|---|---|---|---|---|---|---|---|---|---|---|---|--|---|--|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|

| 1 Series | 2 Type | 3 Version | 4 Bore (mm) |
|---|--|---|--|
| KL = Ø 32÷125 mm - ISO 15552 Pneumatic cylinders | 1 = Stainless steel piston rod 2 = Chromium-plated steel piston rod | 00 = D.A. Standard version 01 = D.A. Through piston rod 60 = S.A. Retracted piston rod Max stroke 50 mm 70 = S.A. Extended piston rod Max stroke 50 mm D.A. = Double acting S.A. = Single acting | 032 = Ø32 080 = Ø80 040 = Ø40 100 = Ø100 050 = Ø50 125 = Ø125 063 = Ø63 |
| 5 Stroke (mm) | 6 Option | 7 Magnetic | 8 ATEX option |
| 0025 = 25 0150 = 150 0320 = 320 0700 = 700 0050 = 50 0160 = 160 0350 = 350 0800 = 800 0075 = 75 0175 = 175 0400 = 400 0900 = 900 0080 = 80 0200 = 200 0450 = 450 1000 = 1000 0100 = 100 0250 = 250 0500 = 500 0125 = 125 0300 = 300 0600 = 600 | F = Preset for locking unit reduced protrusion G = Preset for locking unit ISO protrusion | M = Magnetic version standard supplied | X = ATEX (upon request) See ATEX Catalogue for types and versions |

Versions with high temperature seals (Max 120°C) and version with low temperature seals (Max -40°C) available upon request

Stroke tolerances

| Ø | stroke ≤ 500 | 501 ≤ stroke ≤ 1000 |
|-----|--------------|---------------------|
| | mm | mm |
| 32 | +2 - 0 | +3,2 - 0 |
| 40 | +2 - 0 | +3,2 - 0 |
| 50 | +2 - 0 | +3,2 - 0 |
| 63 | +2,5 - 0 | +4 - 0 |
| 80 | +2,5 - 0 | +4 - 0 |
| 100 | +2,5 - 0 | +4 - 0 |
| 125 | +4 - 0 | +5 - 0 |

Single acting cylinder Theoretical forces (N) for return stroke

| Ø | Max force | Min. force |
|-----|--------------|--------------|
| | stroke 50 mm | stroke 50 mm |
| 32 | 52 | 28 |
| 40 | 70 | 42,5 |
| 50 | 98 | 48 |
| 63 | 98 | 48 |
| 80 | 140 | 80 |
| 100 | 140 | 80 |
| 125 | 235 | 175 |

Theoretical forces (N) at different working pressure (bar)

| Ø | Surface area | | Working pressure | | | | | Working pressure | | | | |
|-----|-----------------|----------|------------------|------|------|------|-------|------------------|------|------|------|-------|
| | mm ² | | bar | | | | | bar | | | | |
| | Thrust | Traction | Thrust | | | | | Traction | | | | |
| | | | 2 | 4 | 6 | 8 | 10 | 2 | 4 | 6 | 8 | 10 |
| 32 | 804 | 691 | 161 | 322 | 482 | 643 | 804 | 138 | 276 | 414 | 553 | 691 |
| 40 | 1256 | 1056 | 251 | 502 | 754 | 1005 | 1256 | 211 | 422 | 633 | 844 | 1055 |
| 50 | 1962 | 1649 | 393 | 785 | 1178 | 1570 | 1963 | 330 | 660 | 990 | 1320 | 1650 |
| 63 | 3116 | 2802 | 623 | 1246 | 1869 | 2493 | 3116 | 560 | 1120 | 1680 | 2240 | 2800 |
| 80 | 5024 | 4533 | 1005 | 2010 | 3014 | 4019 | 5024 | 907 | 1814 | 2722 | 3629 | 4536 |
| 100 | 7850 | 7359 | 1570 | 3140 | 4710 | 6280 | 7850 | 1472 | 2944 | 4416 | 5888 | 7360 |
| 125 | 12266 | 11462 | 2453 | 4906 | 7359 | 9812 | 12266 | 2294 | 4588 | 6882 | 9176 | 11470 |

Cushion

| Ø | Length | Max kinetic energy absorption |
|-----|--------|-------------------------------|
| | mm | Nm |
| 32 | 18 | 1,8 |
| 40 | 24 | 2,5 |
| 50 | 24 | 4,5 |
| 63 | 30 | 8 |
| 80 | 30 | 12 |
| 100 | 35 | 21 |
| 125 | 35 | 36 |

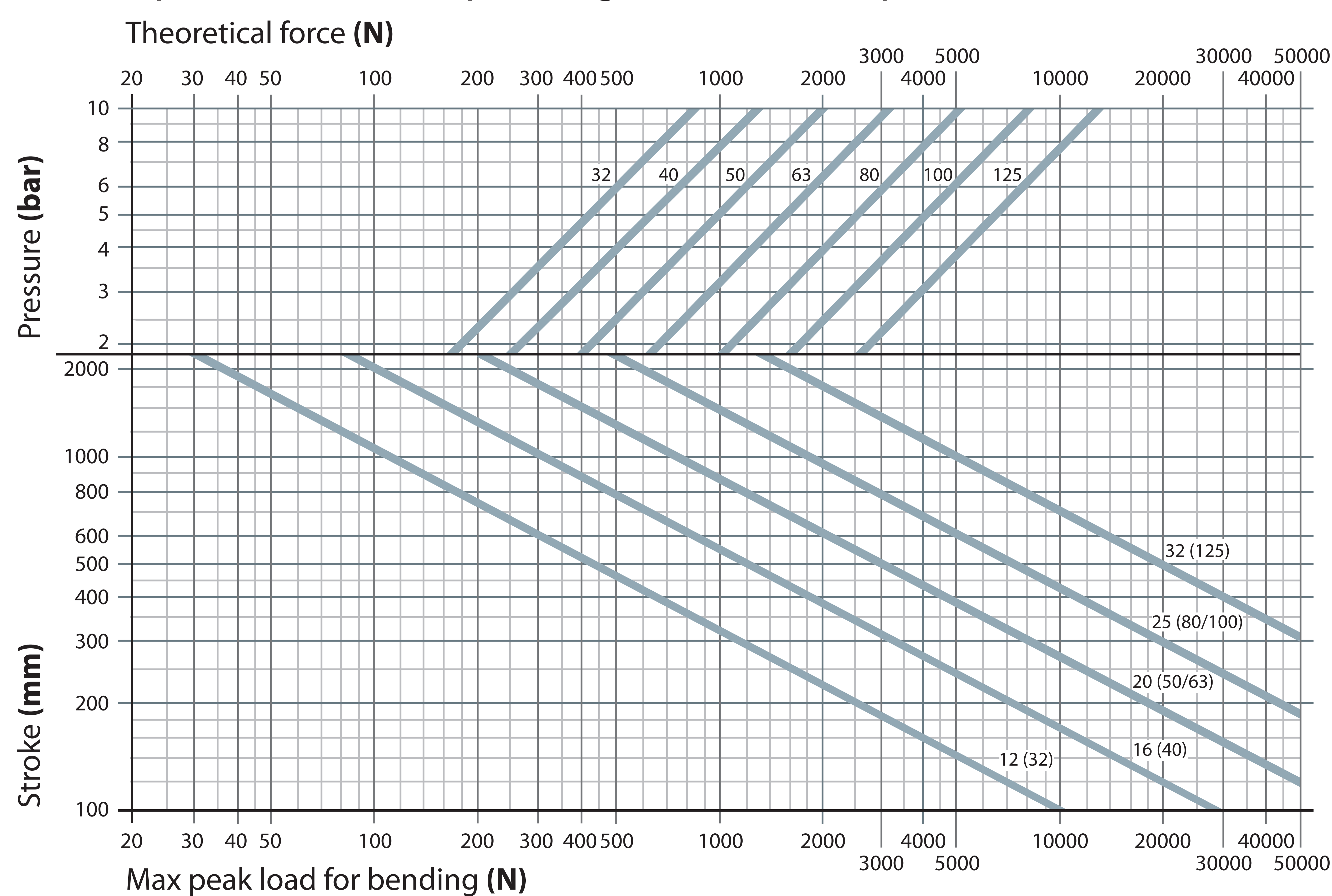
Mass - Standard cylinder

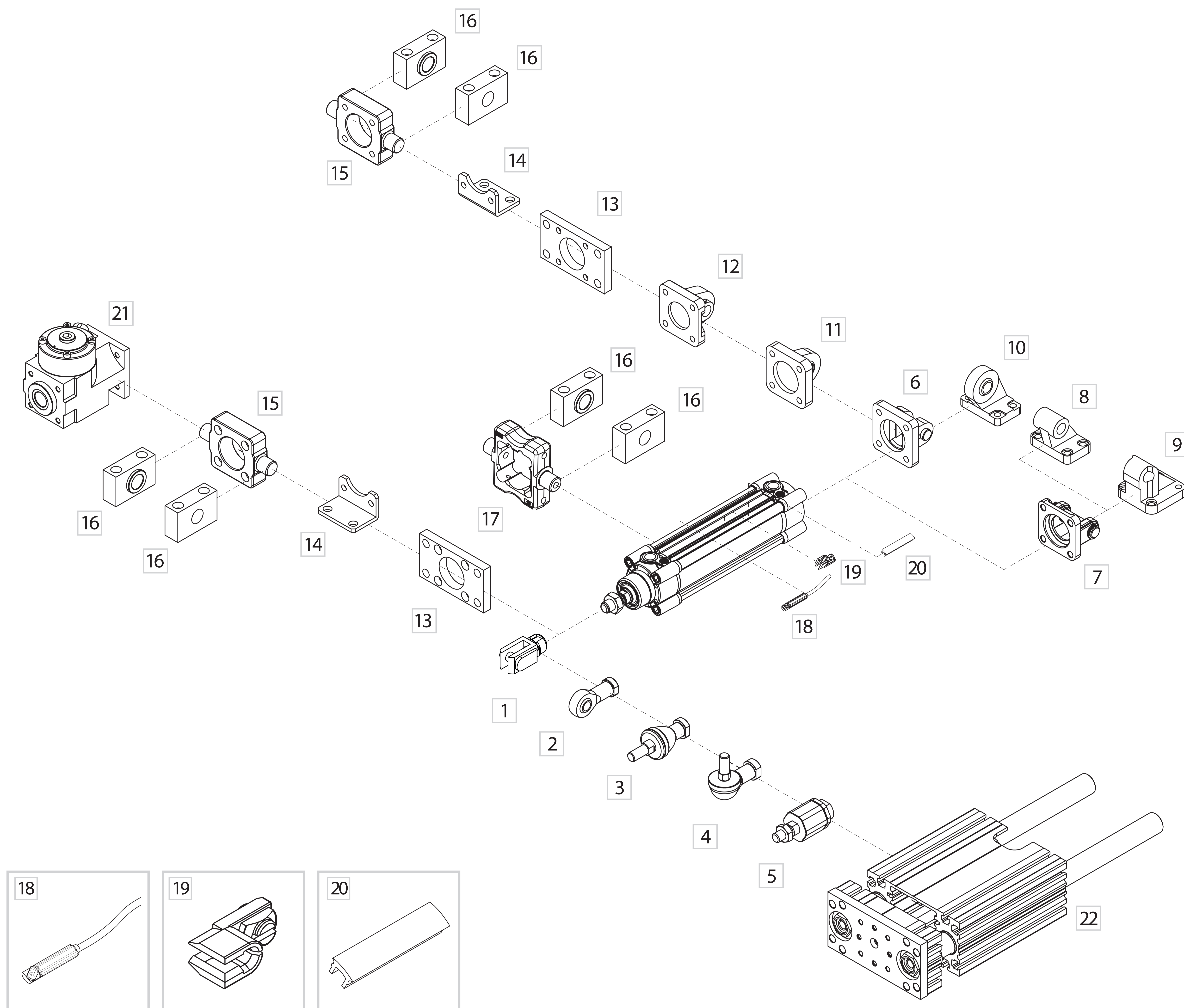
| Ø | Cylinder - stroke 0 | Increase per mm stroke | Moving element - stroke 0 | Increase per mm stroke |
|-----|---------------------|------------------------|---------------------------|------------------------|
| | g | g | g | g |
| 32 | 480 | 2,05 | 130 | 0,9 |
| 40 | 710 | 3,06 | 250 | 1,6 |
| 50 | 1180 | 4,28 | 440 | 2,5 |
| 63 | 1740 | 4,91 | 550 | 2,5 |
| 80 | 2740 | 7,20 | 970 | 3,9 |
| 100 | 3920 | 8,00 | 1190 | 3,9 |
| 125 | 6830 | 12,40 | 2200 | 6,3 |

Mass- Through piston rod cylinder

| Ø | Cylinder - stroke 0 | Increase per mm stroke | Moving element - stroke 0 | Increase per mm stroke |
|-----|---------------------|------------------------|---------------------------|------------------------|
| | g | g | g | g |
| 32 | 550 | 2,92 | 190 | 1,8 |
| 40 | 850 | 4,62 | 360 | 3,2 |
| 50 | 1440 | 6,72 | 640 | 4,9 |
| 63 | 2010 | 7,36 | 740 | 4,9 |
| 80 | 3190 | 11,0 | 1350 | 7,6 |
| 100 | 4460 | 11,8 | 1570 | 7,6 |
| 125 | 7810 | 18,53 | 3050 | 12,4 |

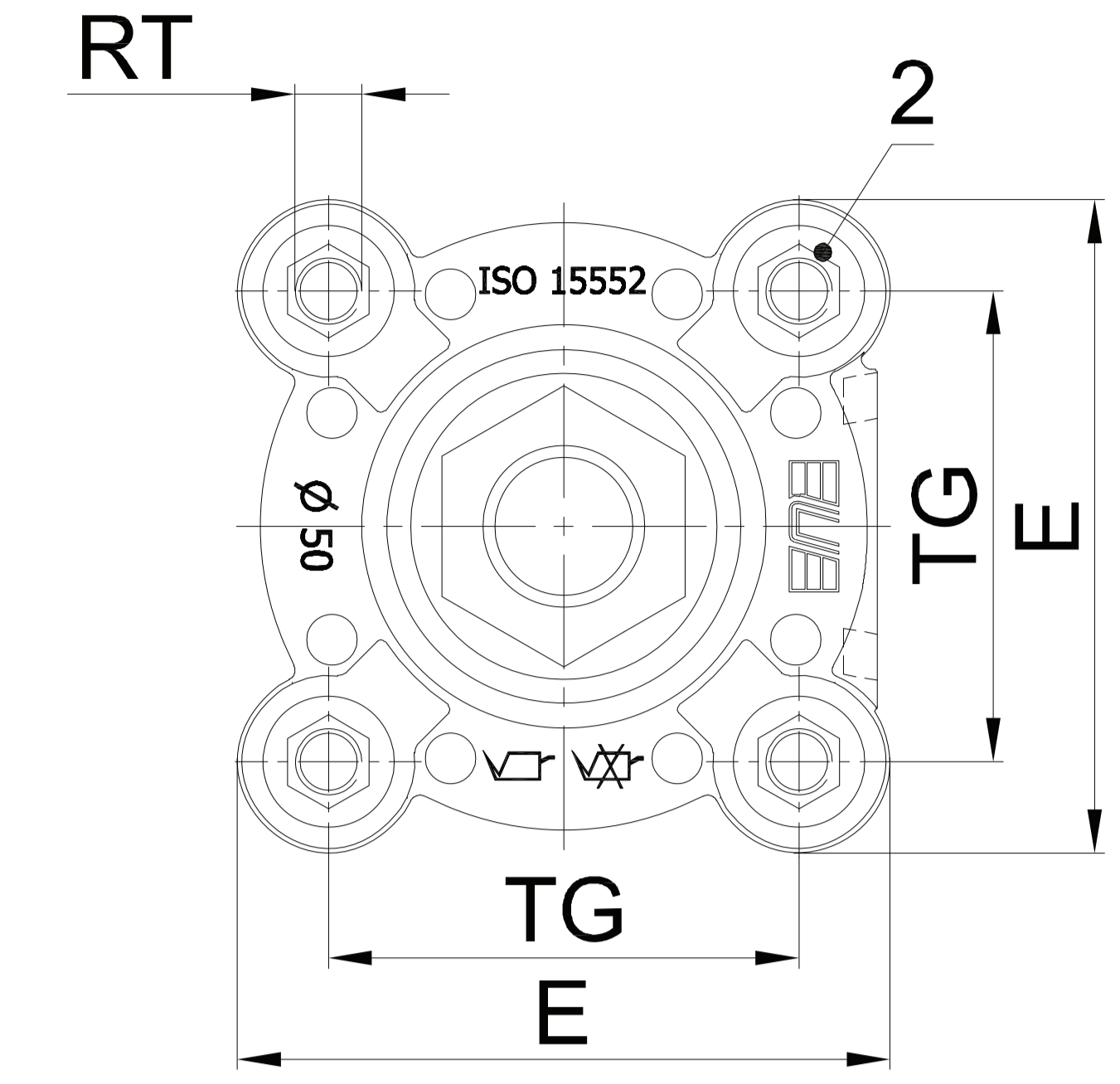
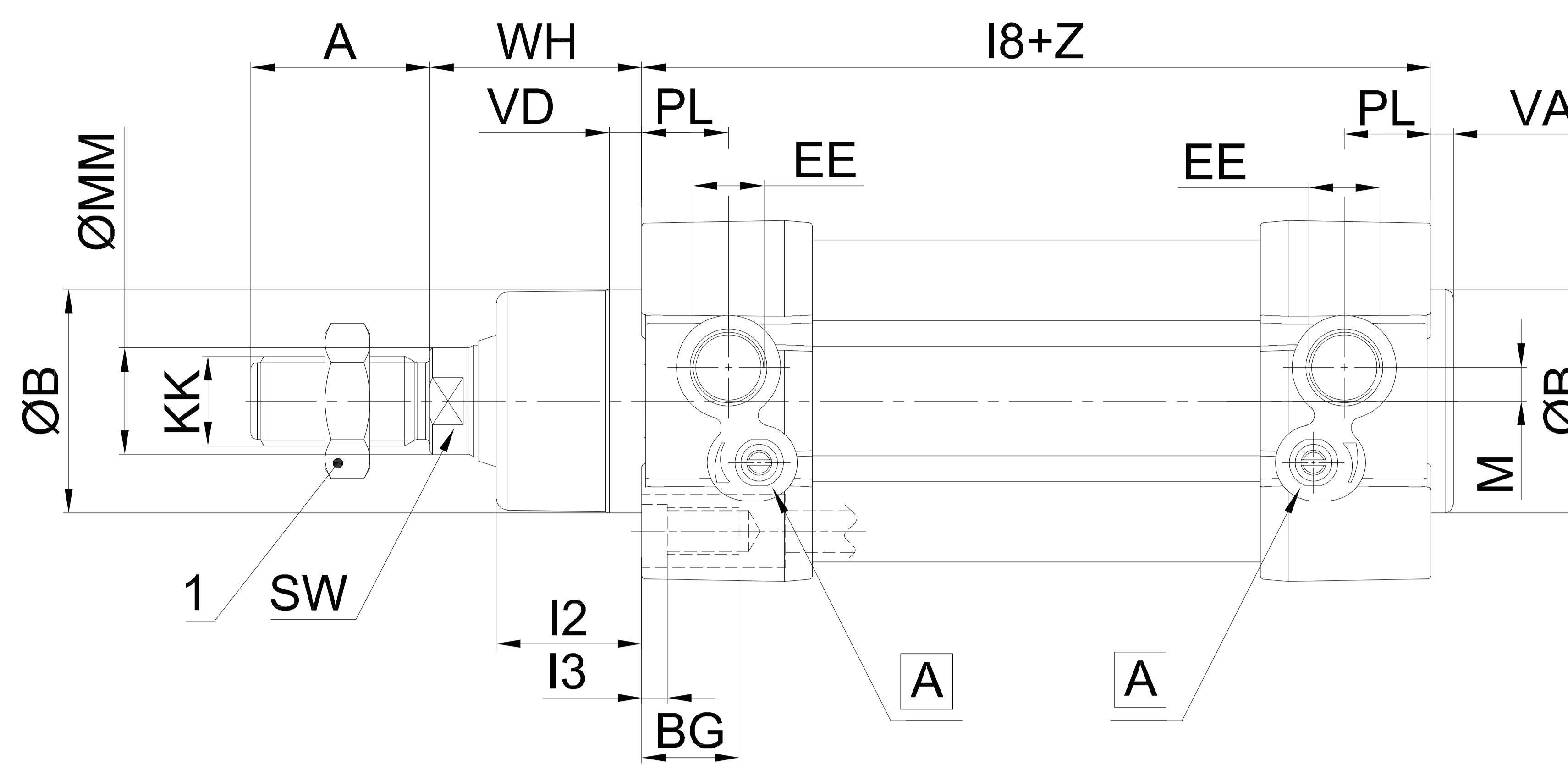
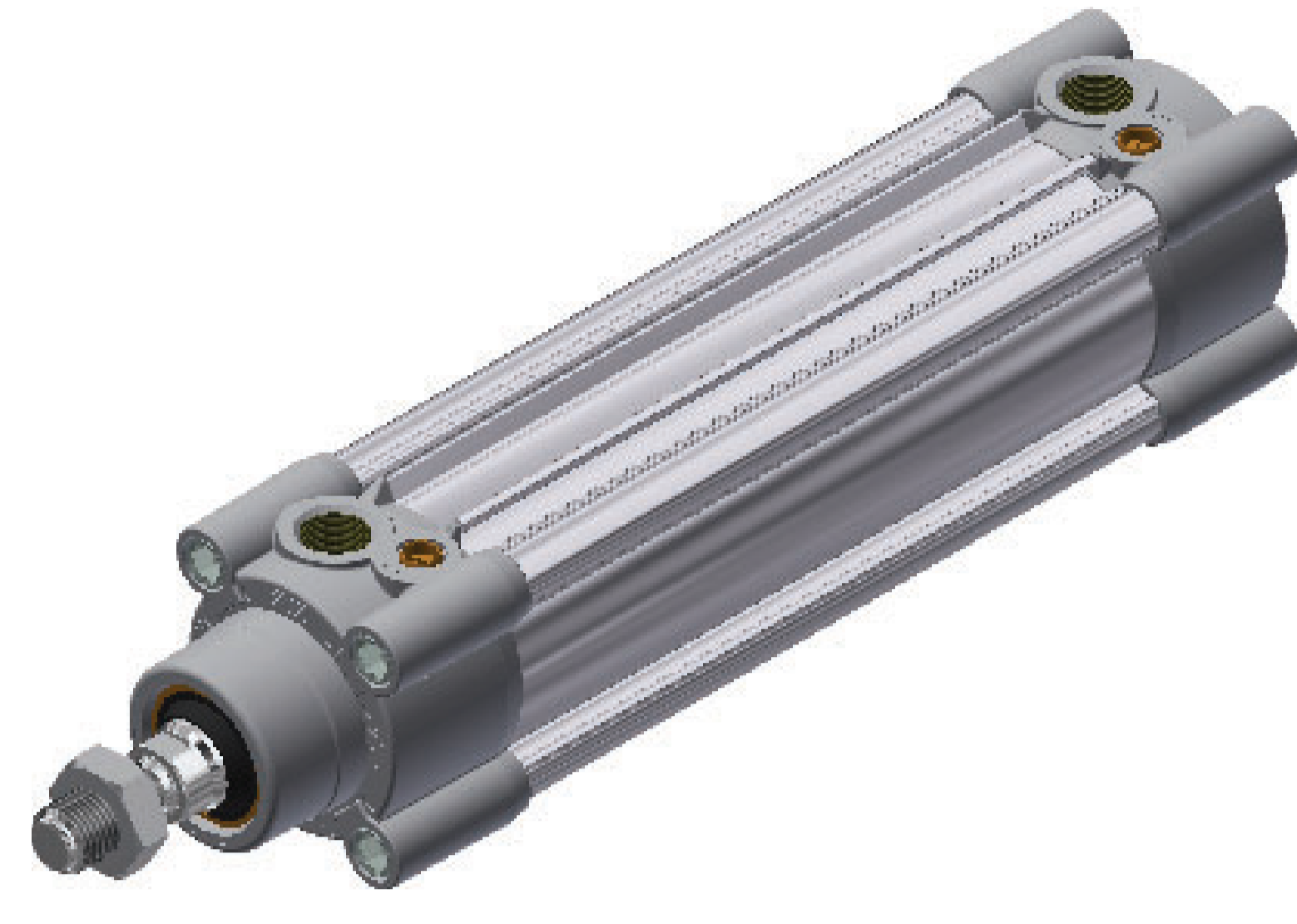
Graph of theoretical forces/pressure and acceptable strokes depending on maximum peak load



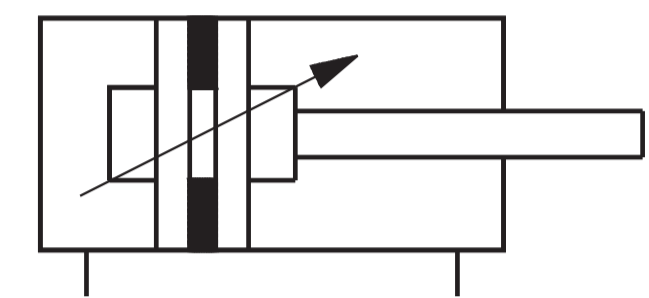
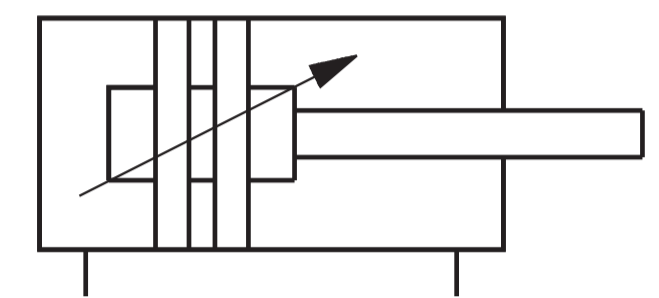


| DESCRIPTION | NOTE | PART NO. |
|---|------|---------------|
| 1 Female fork with clips | | KF-15 ___ |
| 2 Articulated self-lubricating fork | | KF-17 ___ |
| 3 Fork with axially mounted articulated pin | | KF-22 ___ |
| 4 Fork with angle-mounted articulated pin | | KF-23 ___ |
| 5 Floating joint | | KF-24 ___ |
| 6 Female hinge (ISO MP2) with pin | | KF-10 ___ A |
| 7 Narrow female hinge with pin (DIN648K) | | KF-10 ___ AS |
| 8 Counter-hinge 90° (CETOP RP107P) | | KF-19 ___ CTA |
| 9 Counter-hinge 90° | | KF-19 ___ |
| 10 Articulated counter-hinge (DIN648K) | | KF-19 ___ SC |
| 11 Articulated rear male hinge (ISO MP6) | | KF-11 ___ S |
| 12 Rear male hinge (ISO MP4) | | KF-11 ___ |
| 13 Front - rear flange (ISO MF1-MF2) | | KF-12 ___ |
| 14 Angle bracket (ISO MS1) | | KF-13 ___ |
| 15 Front - rear hinge with floating pin | | KF-14 ___ AP |
| 16 Support for hinges | | KF-41 ___ |
| 17 ISO intermediate hinge (ISO MT4) | | KLF-14 ___ |
| 18 DF magnetic sensor (see accessories section) | | DF- ___ |
| 19 Cable clamping for DF sensor (see accessories section) | | DF-001 |
| 20 DHF covering strip (see accessories section) | | DHF-0020100 |
| 21 Locking unit | | L1-N |
| 22 Slide unit | | J12 |

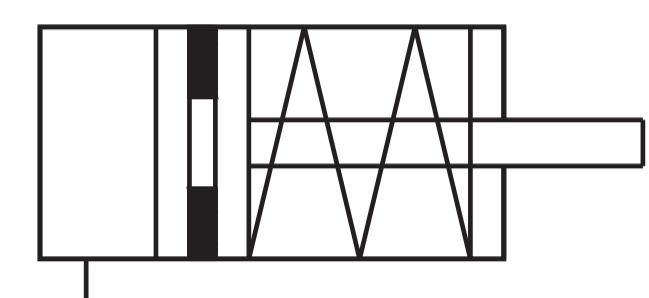
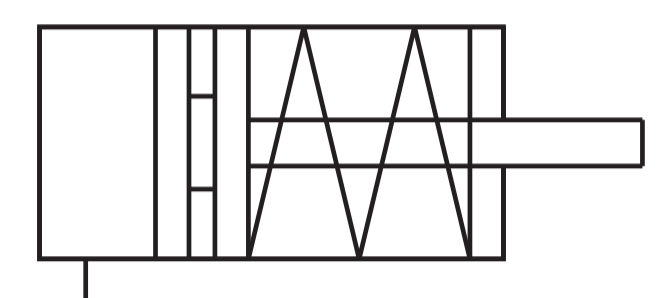
Double acting/Single acting



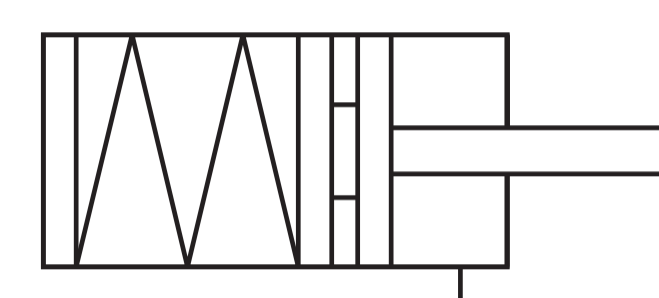
A Pneumatic cushioning adjusting screw



KL100/200
D.A. Standard



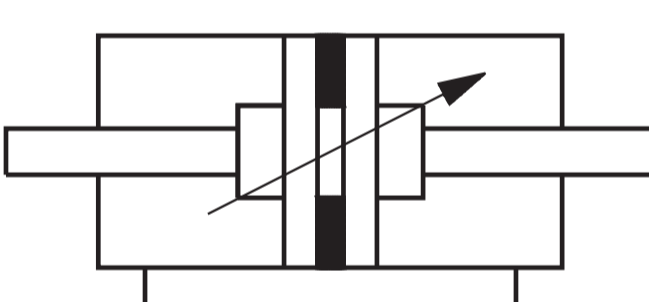
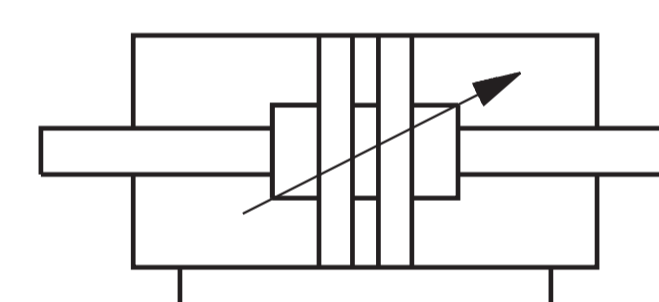
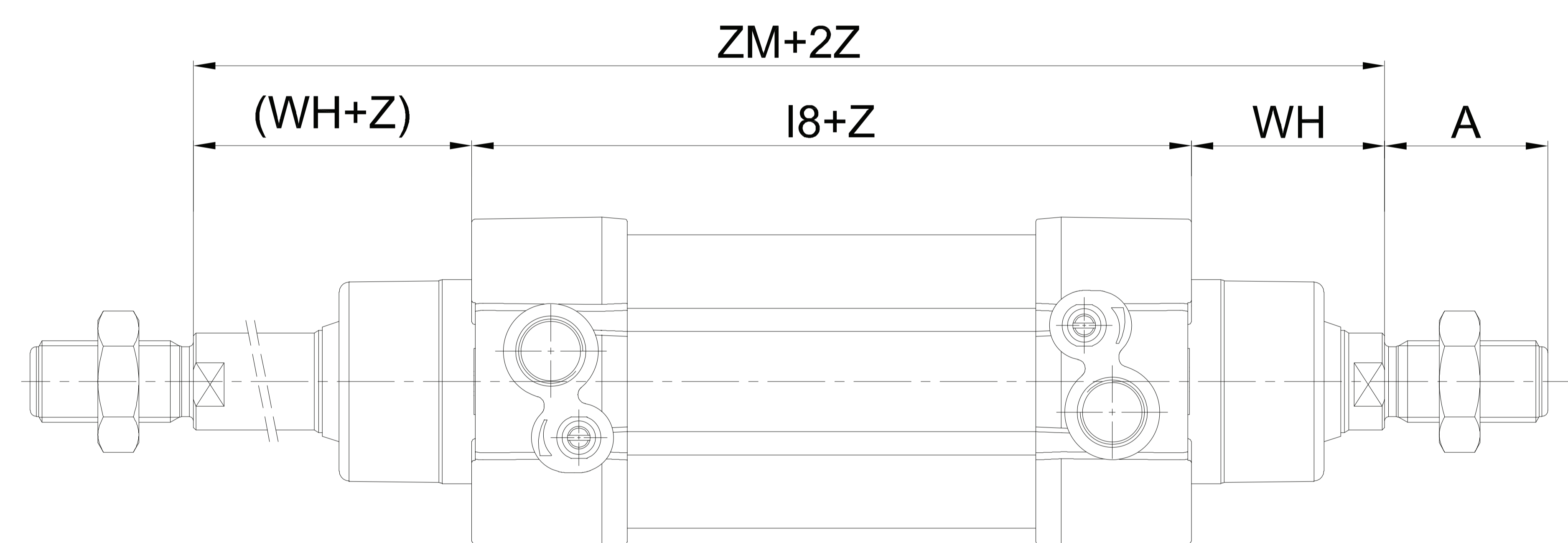
KL160/260
S.A. Retracted piston rod



KL170/270
S.A. Extended piston rod

For extended rod version add **WH+Z** (stroke) dimensions

Double acting through piston rod



KL101/201
D.A. Through piston rod

Z= Stroke

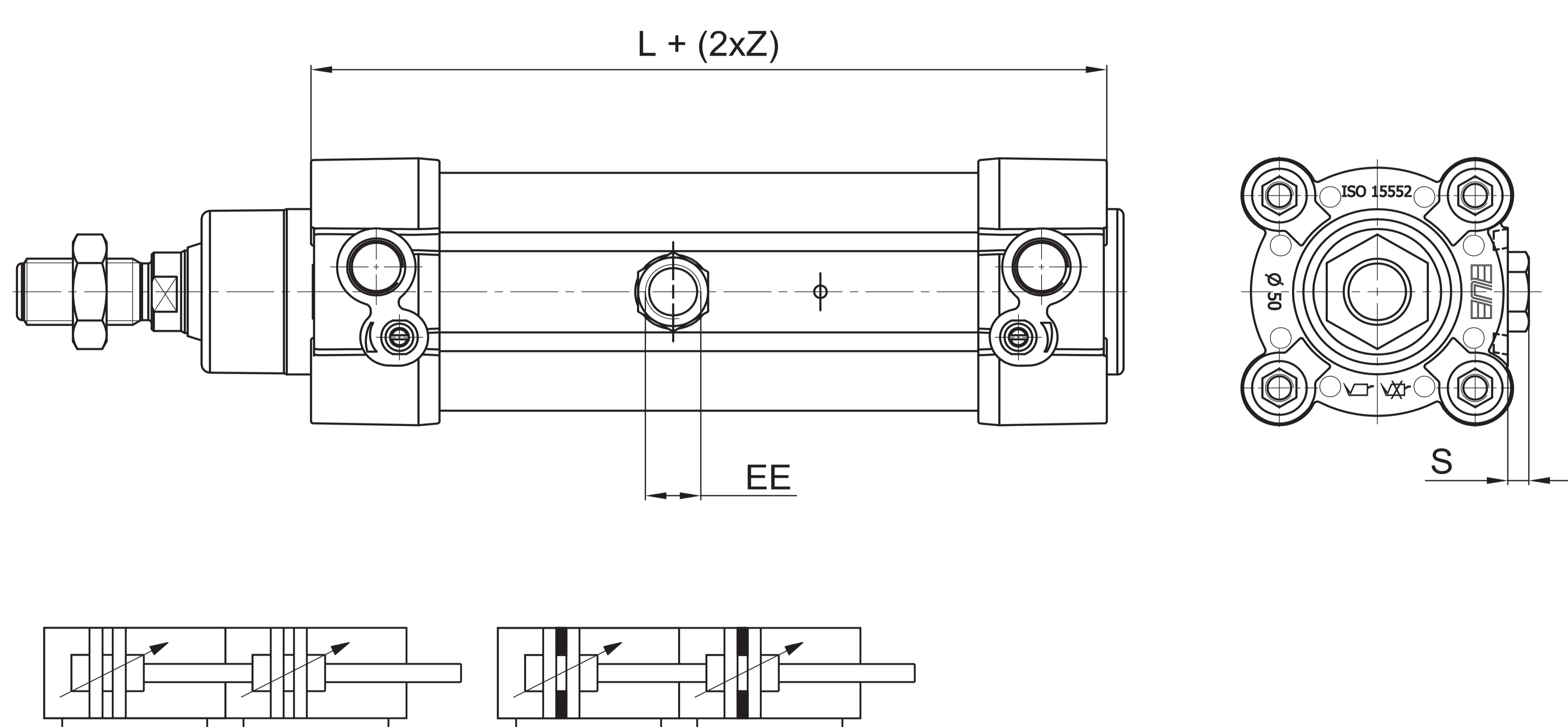
| Ø | A | ØB | BG | E+0,5 | KK | I2 | I3 | I8 | PL | RT | SW | TG | VA | VD | WH | ØMM | EE | M | 1 | 2 | ZM |
|-----|----|----|----|-------|----------|----|----|----------|------|-----|----|-----------|-----|-----|----|-----|------|-----|----|----|-----|
| 32 | 22 | 30 | 16 | 46,5 | M10x1,25 | 16 | 5 | 94 ±0,4 | 14 | M6 | 10 | 32,5 ±0,5 | 3,5 | 5 | 26 | 12 | G1/8 | 4,4 | 17 | 6 | 146 |
| 40 | 24 | 35 | 16 | 52 | M12x1,25 | 20 | 5 | 105 ±0,7 | 16 | M6 | 13 | 38 ±0,5 | 4 | 5,5 | 30 | 16 | G1/4 | 5 | 19 | 6 | 165 |
| 50 | 32 | 40 | 17 | 64,5 | M16x1,5 | 26 | 6 | 106 ±0,7 | 15,5 | M8 | 17 | 46,5 ±0,6 | 4 | 6 | 37 | 20 | G1/4 | 6 | 24 | 8 | 180 |
| 63 | 32 | 45 | 18 | 76,5 | M16x1,5 | 26 | 6 | 121 ±0,8 | 17,5 | M8 | 17 | 56,5 ±0,7 | 4 | 6 | 37 | 20 | G3/8 | 8 | 24 | 8 | 195 |
| 80 | 40 | 45 | 20 | 95 | M20x1,5 | 32 | 7 | 128 ±0,8 | 20 | M10 | 22 | 72 ±0,7 | 4 | 8 | 46 | 25 | G3/8 | 7,5 | 30 | 10 | 220 |
| 100 | 40 | 55 | 20 | 114 | M20x1,5 | 35 | 7 | 138 ±1 | 20,5 | M10 | 22 | 89 ±0,7 | 4 | 8 | 51 | 25 | G1/2 | 9 | 30 | 10 | 240 |
| 125 | 54 | 60 | 24 | 140 | M27x2 | 45 | 8 | 160 ±1 | 20,5 | M12 | 27 | 110 ±1,1 | 5,5 | 10 | 65 | 32 | G1/2 | 11 | 41 | 12 | 290 |

Tandem version

CODIFICATION KEY

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| K | L | 2 | A | 0 | 3 | 2 | 0 | 5 | 0 | M |
| 1 | 2 | 3 | 4 | 5 | | | | | | |

| 1 Series | 2 Type | 3 Bore (mm) | 4 Stroke (mm) | 5 Magnetic |
|---|--|---|---------------|--|
| KL = Ø 32÷125 mm - ISO 15552 Pneumatic cylinders Magnetic version standard supplied | 1A = Double thrust tandem only for forward movement, stainless steel piston rod 2A = Double thrust tandem only for forward movement, chromium-plated steel piston rod 1D = Double thrust tandem only for reverse movement, stainless steel piston rod 2D = Double thrust tandem only for reverse movement, chromium-plated steel piston rod | 032 = Ø32 080 = Ø80 040 = Ø40 100 = Ø100 050 = Ø50 125 = Ø125 063 = Ø63 | Upon request | M = Magnetic version (standard supplied) |



Z = Stroke

| Ø | EE | L | S Max |
|-----|------|-----|-------|
| 32 | G1/8 | 169 | 3 |
| 40 | G1/4 | 189 | 5 |
| 50 | G3/8 | 175 | 4 |
| 63 | G3/8 | 195 | 7 |
| 80 | G1/2 | 211 | 6 |
| 100 | G1/2 | 224 | 9 |
| 125 | G1/2 | 251 | 9 |

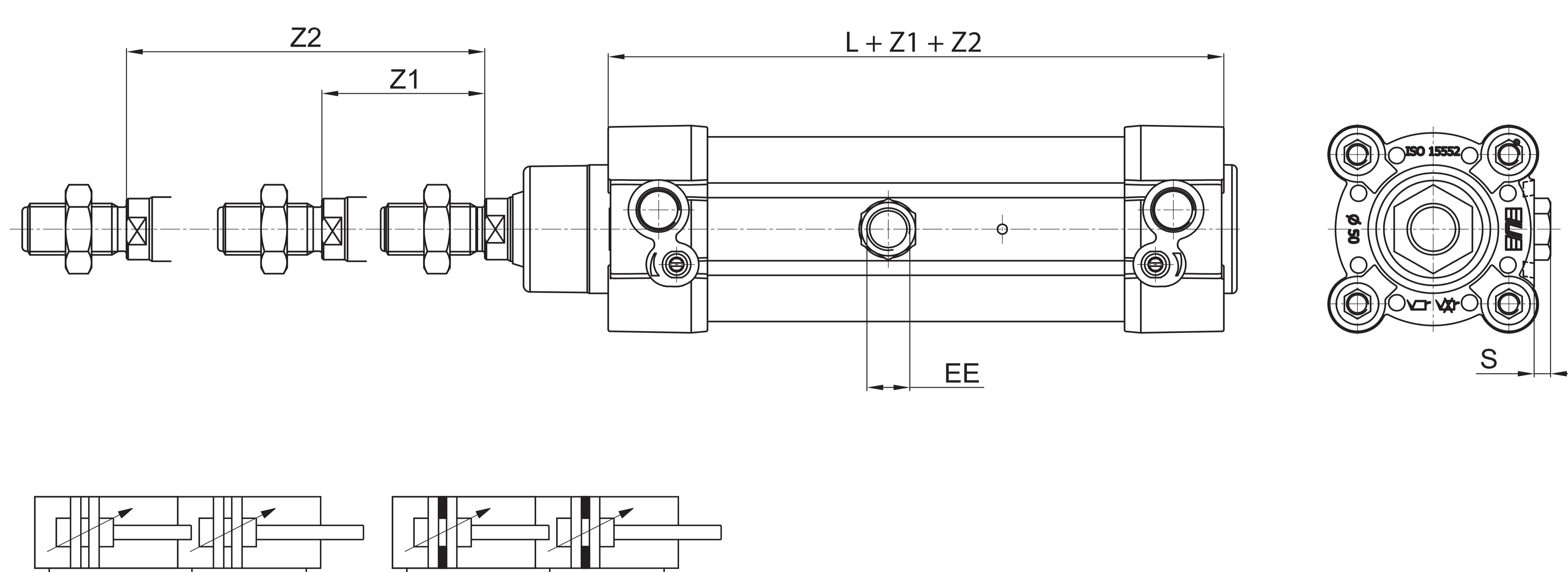
Tandem cylinders are constructed using two pistons coupled together which provide double the force in forward movement compared to the traditional ISO cylinders of the same bore size.

Two-position tandem version

CODIFICATION KEY

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K | L | 2 | B | 0 | 3 | 2 | 0 | 5 | 0 | 0 | 7 | 0 | M |
| 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | |

| 1 Series | 2 Type | 3 Bore (mm) | 4 Stroke Z1 (mm) | 5 Stroke Z2 (mm) | 6 Magnetic |
|---|--|---|---|---|--|
| KL = Ø 32÷125 mm - ISO 15552 Pneumatic cylinders Magnetic version standard supplied | 1B = Two-position tandem, stainless steel 2B = Two-position tandem, chromium-plated steel | 032 = Ø32 080 = Ø80 040 = Ø40 100 = Ø100 050 = Ø50 125 = Ø125 063 = Ø63 | Stroke of rear cylinder (upon request) | Stroke of head cylinder (upon request) | M = Magnetic version (standard supplied) |



Z = Stroke

| Ø | EE | L | S Max |
|-----|------|-----|-------|
| 32 | G1/8 | 166 | 3 |
| 40 | G1/4 | 186 | 5 |
| 50 | G1/4 | 172 | 4 |
| 63 | G3/8 | 192 | 7 |
| 80 | G3/8 | 208 | 6 |
| 100 | G1/2 | 221 | 9 |
| 125 | G1/2 | 248 | 9 |

Two-position cylinders with two independent piston-rods which allow to realize a double positioning in which the thrust forces are the same as those of an ISO cylinder of the same bore size.

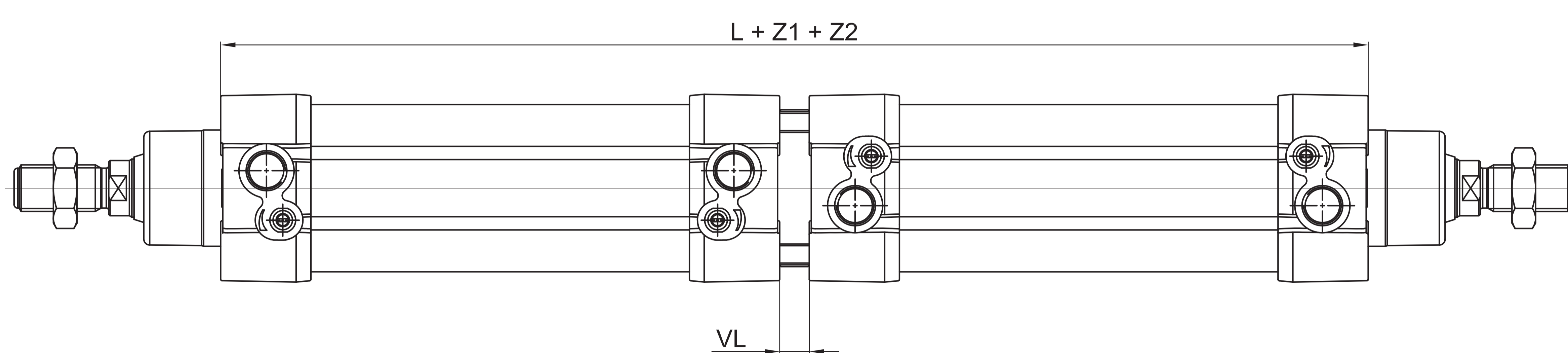
For all other dimensions please refer to the standard version.
For other types of cylinders kindly contact our sales office.

Opposed tandem version

CODIFICATION KEY

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K | L | 2 | C | 0 | 3 | 2 | 0 | 3 | 0 | 0 | 5 | 0 | M |
| 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | |

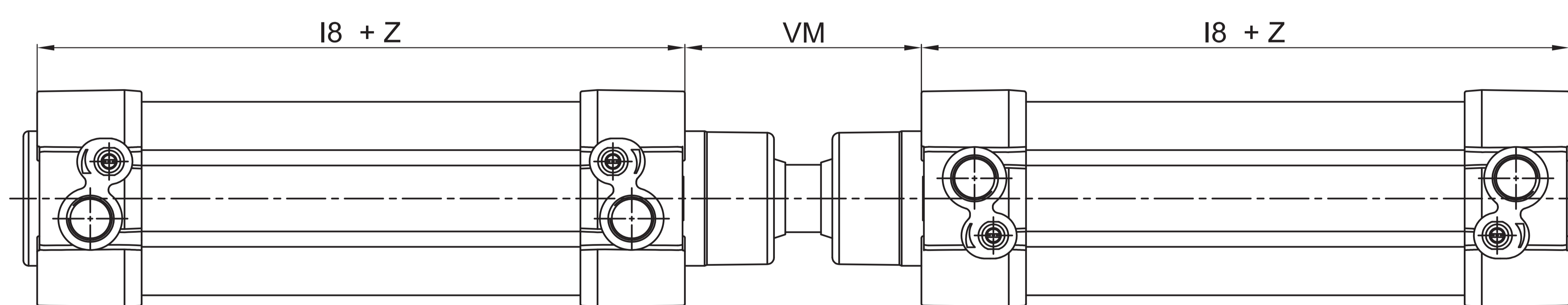
| 1 Series | 2 Type | 3 Bore (mm) | 4 Stroke Z1 (mm) | 5 Stroke Z2 (mm) | 6 Magnetic |
|--|--|--|--|---------------------------------|--|
| KL = Ø 32÷125 mm - ISO 15552 Pneumatic cylinders Magnetic version standard supplied | 1C = Opposed tandem, stainless steel 2C = Opposed tandem, chromium-plated steel | 032 = Ø32 040 = Ø40 050 = Ø50 063 = Ø63 | 080 = Ø80 100 = Ø100 125 = Ø125 Shorter stroke (upon request) | Longer stroke (upon request) | M = Magnetic version (standard supplied) |



| Ø | Z = Stroke | |
|-----|------------|----|
| | L | VL |
| 32 | 194 | 6 |
| 40 | 220 | 10 |
| 50 | 222 | 10 |
| 63 | 252 | 10 |
| 80 | 266 | 10 |
| 100 | 288 | 12 |
| 125 | 334 | 14 |

Type of cylinder characterized by the coupling of two cylinders and whose piston rods move in opposite directions. The values of the thrust force are the same as those of the traditional cylinders.

With common piston rod tandem version (upon request)

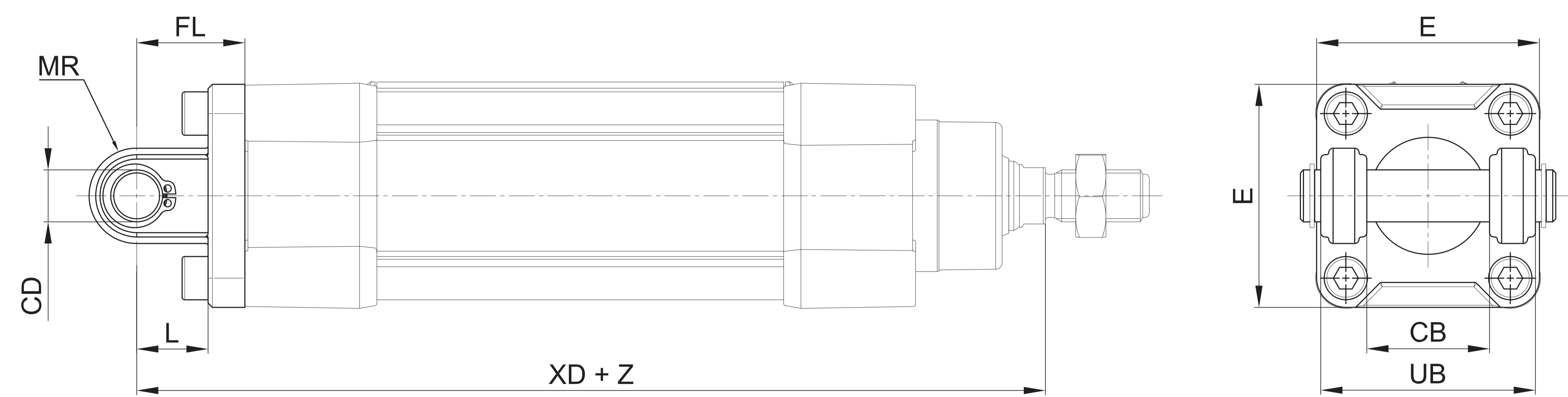
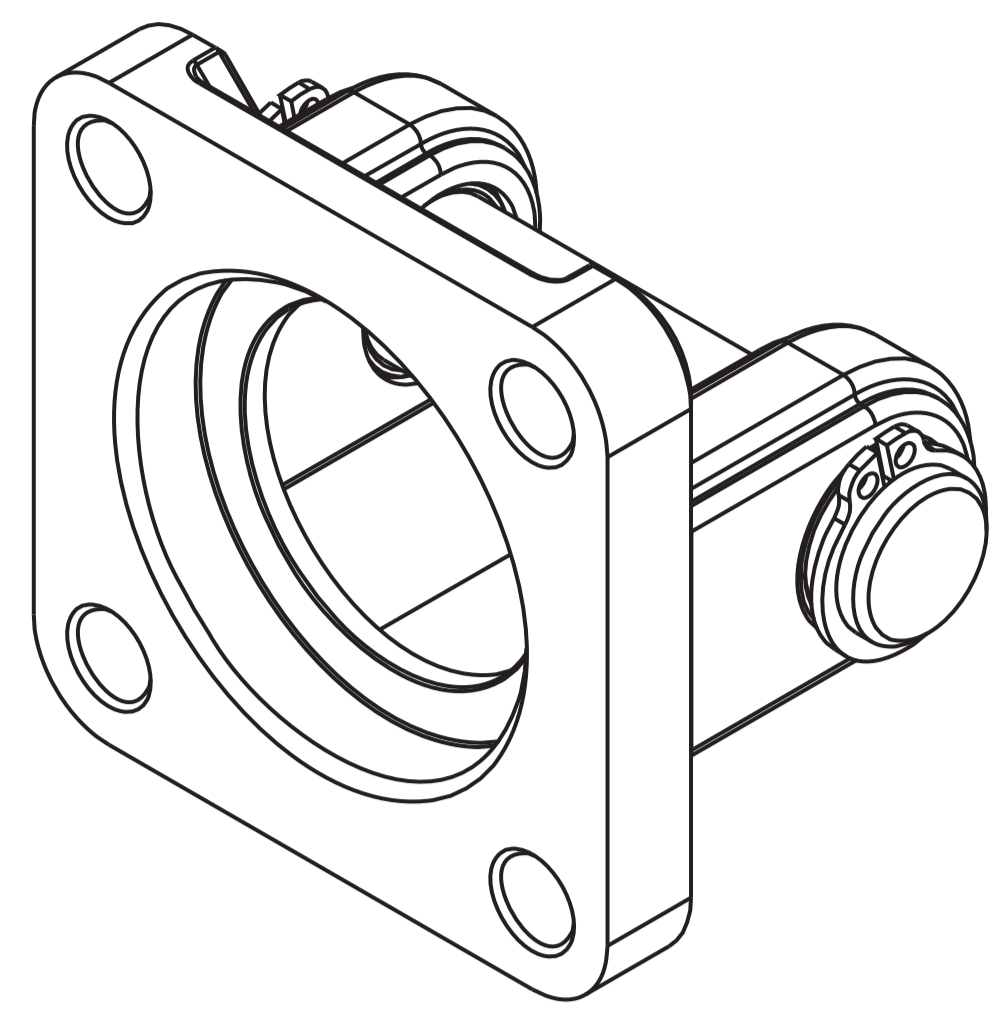


| Ø | Z = Stroke | |
|-----|------------|------|
| | I8 | VM |
| 32 | 94 | ±0,4 |
| 40 | 105 | ±0,7 |
| 50 | 106 | ±0,7 |
| 63 | 121 | ±0,8 |
| 80 | 128 | ±0,8 |
| 100 | 138 | ±1 |
| 125 | 160 | ±1 |

Two coupled cylinders with common piston rod
The values of the thrust force are the same as those of the traditional cylinders.

For all other dimensions please refer to the standard version.
For other types of cylinders kindly contact our sales office

Female hinge (ISO MP2) with pin

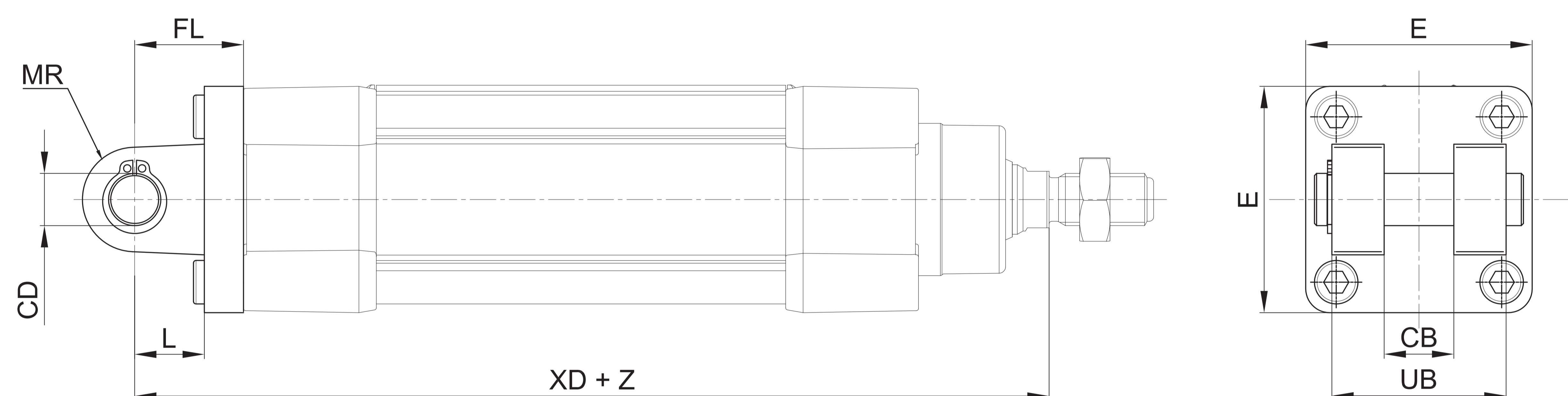
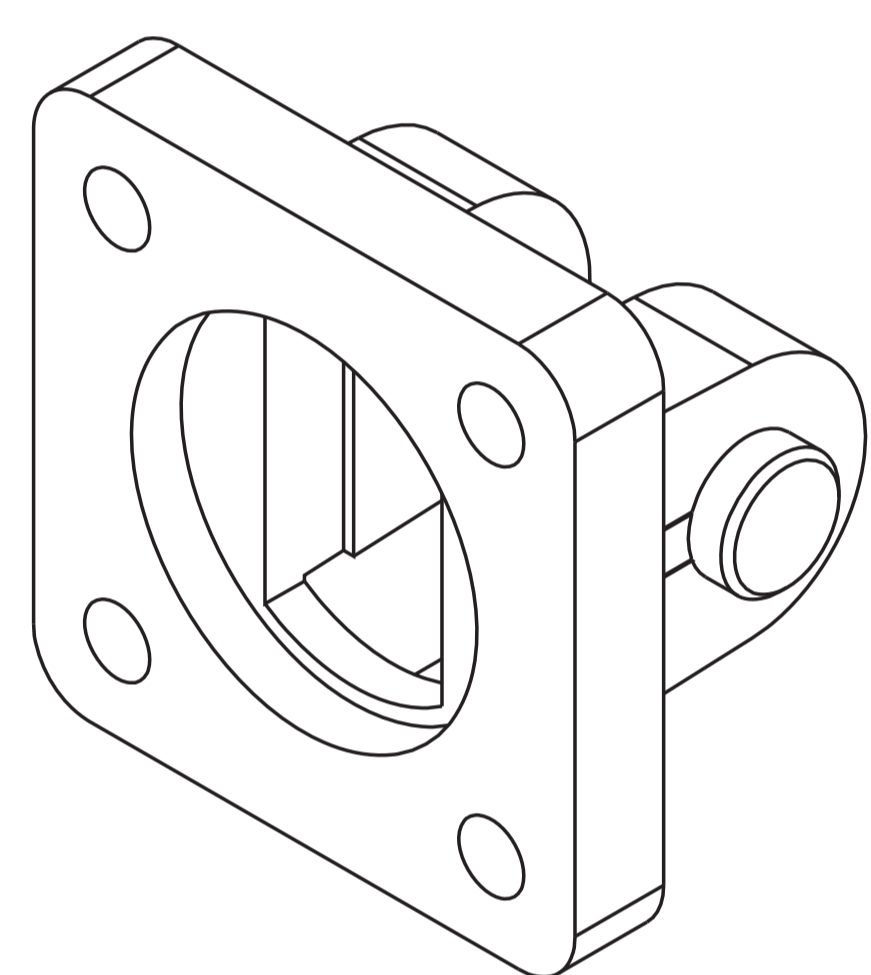


Material: Aluminium, zinc-plated steel pin

Z = Stroke

| Ø | CB | CD | E | FL | L | MR | UB | XD | | Mass | Part no. |
|-----|-----|----|-----|-------|------|-----|-----|-----|-------|------|-----------|
| | H14 | H9 | | ± 0,2 | min. | Max | | h14 | | | |
| 32 | 26 | 10 | 48 | 22 | 12 | 11 | 45 | 142 | ±1,25 | 75 | KF-10032A |
| 40 | 28 | 12 | 54 | 25 | 15 | 13 | 52 | 160 | ±1,25 | 110 | KF-10040A |
| 50 | 32 | 12 | 65 | 27 | 15 | 13 | 60 | 170 | ±1,25 | 150 | KF-10050A |
| 63 | 40 | 16 | 75 | 32 | 20 | 17 | 70 | 190 | ±1,6 | 270 | KF-10063A |
| 80 | 50 | 16 | 95 | 36 | 20 | 17 | 90 | 210 | ±1,6 | 420 | KF-10080A |
| 100 | 60 | 20 | 115 | 41 | 25 | 21 | 110 | 230 | ±1,6 | 765 | KF-10100A |
| 125 | 70 | 25 | 140 | 50 | 30 | 26 | 130 | 275 | ±2 | 1445 | KF-10125A |

Narrow female hinge with pin (DIN648K)

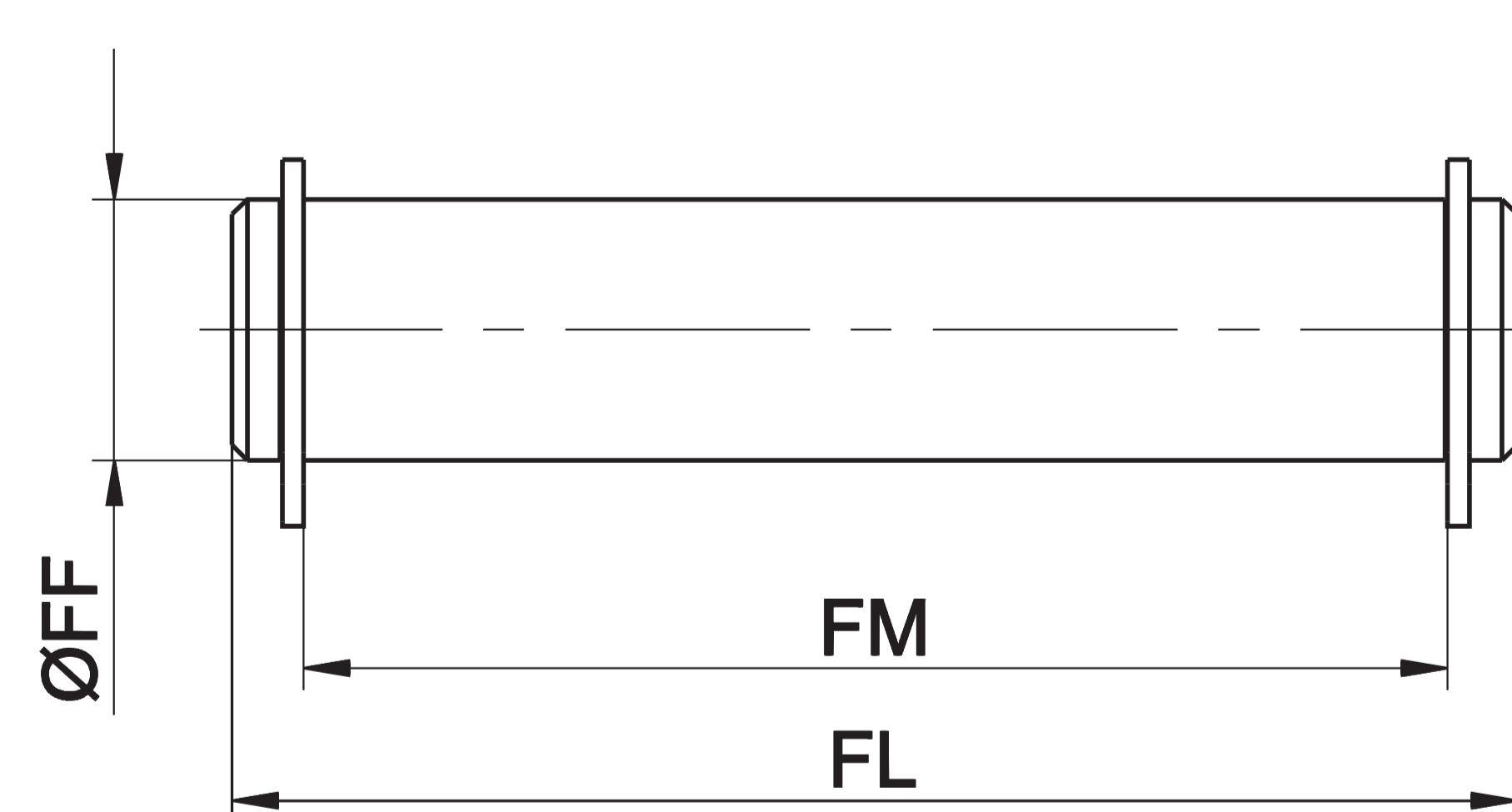


Material: Aluminium, zinc-plated pin

Z = Stroke

| Ø | CB | CD | E | FL | L | MR | UB | XD | | Mass | Part no. |
|-----|-----|----|-----|-------|------|-----|----|-----|-------|------|------------|
| | H14 | H9 | | ± 0,2 | min. | Max | | h14 | | | |
| 32 | 14 | 10 | 45 | 22 | 10 | 10 | 34 | 142 | ±1,25 | 68 | KF-10032AS |
| 40 | 16 | 12 | 52 | 25 | 16 | 12 | 40 | 160 | ±1,25 | 112 | KF-10040AS |
| 50 | 21 | 16 | 65 | 27 | 16 | 14 | 45 | 170 | ±1,5 | 196 | KF-10050AS |
| 63 | 21 | 16 | 75 | 32 | 21 | 18 | 51 | 190 | ±1,6 | 288 | KF-10063AS |
| 80 | 25 | 20 | 95 | 36 | 22 | 20 | 65 | 210 | ±1,6 | 566 | KF-10080AS |
| 100 | 25 | 20 | 115 | 41 | 27 | 22 | 75 | 230 | ±1,6 | 818 | KF-10100AS |
| 125 | 37 | 30 | 140 | 50 | 30 | 25 | 97 | 275 | ±2 | 1706 | KF-10125AS |

Pin for female hinge



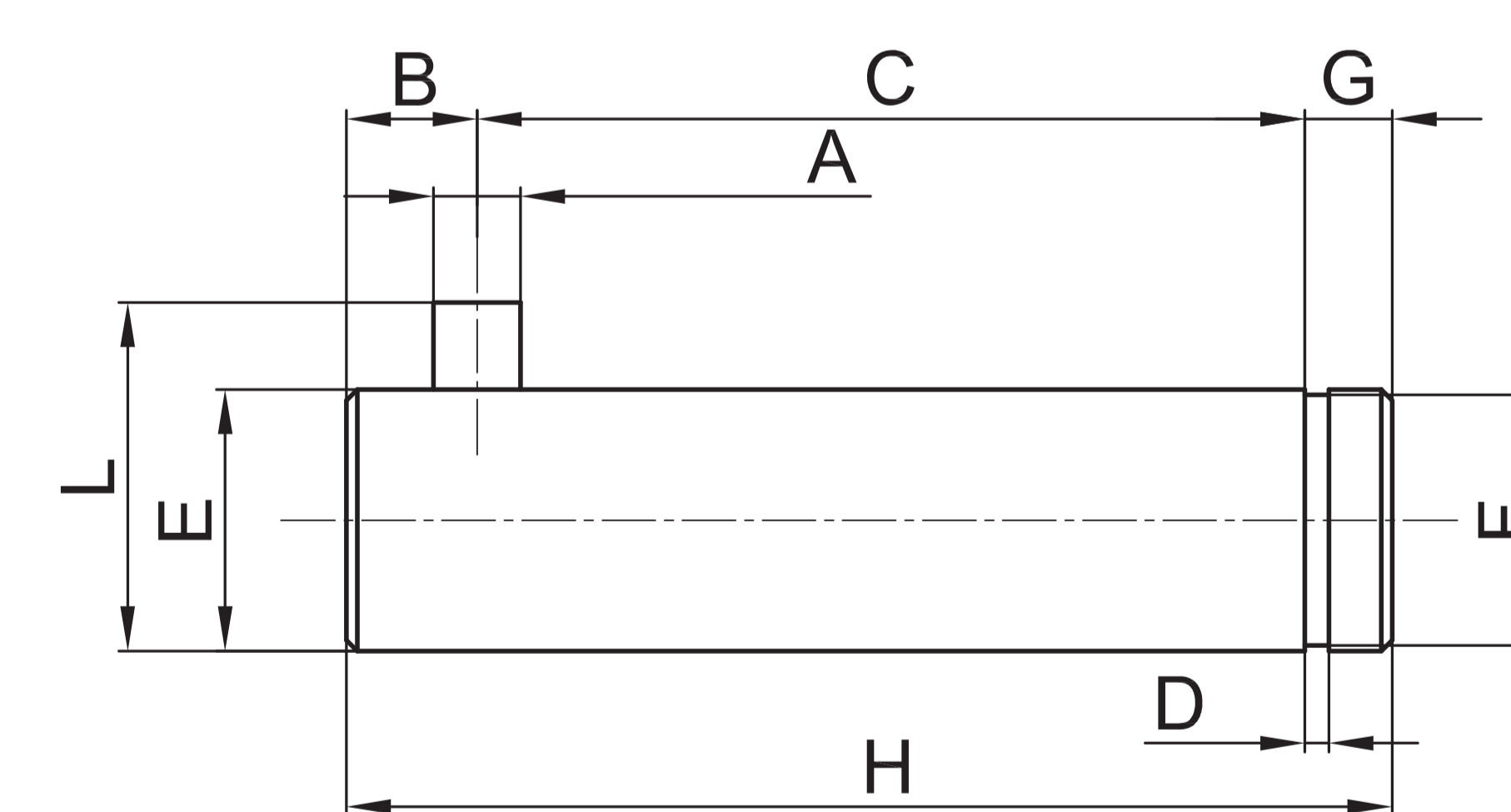
Including 2 circlips

Material: Zinc-plated steel

| Ø | FF | FL | FM | Mass | Part no.* |
|-----|----|-------|-----|------|-----------|
| | f8 | | | | |
| 32 | 10 | 53 | 46 | 30 | KF-18032 |
| 40 | 12 | 61,3 | 53 | 50 | KF-18040 |
| 50 | 12 | 69 | 61 | 50 | KF-18050 |
| 63 | 16 | 80,5 | 71 | 120 | KF-18063 |
| 80 | 16 | 100,5 | 91 | 150 | KF-18080 |
| 100 | 20 | 122,5 | 111 | 290 | KF-18100 |
| 125 | 25 | 140 | 131 | 1530 | KF-18125 |

* = Pin for part no. KF-10...

Pin for narrow female hinge

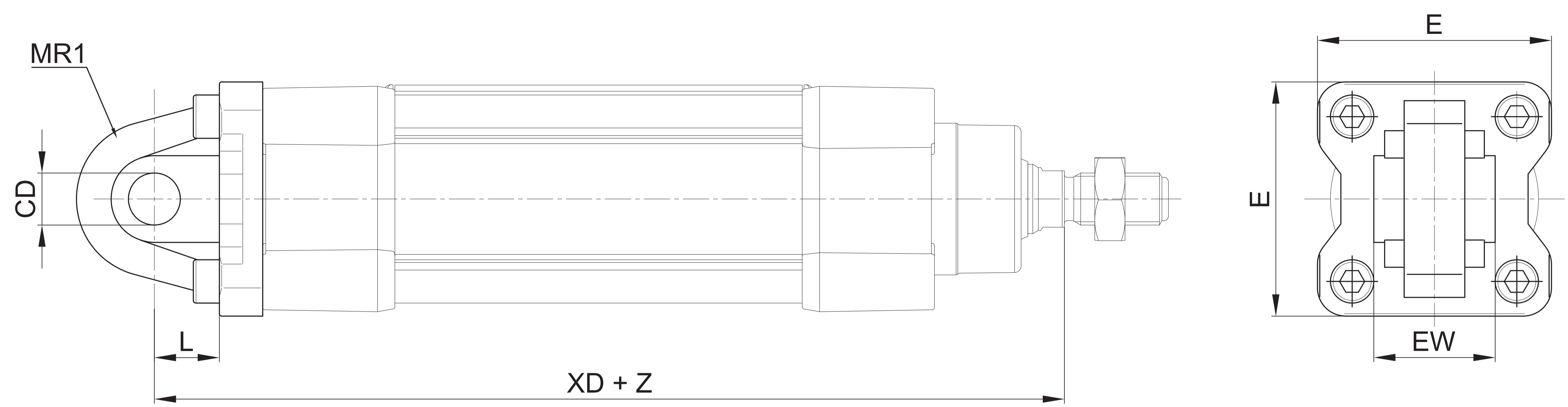
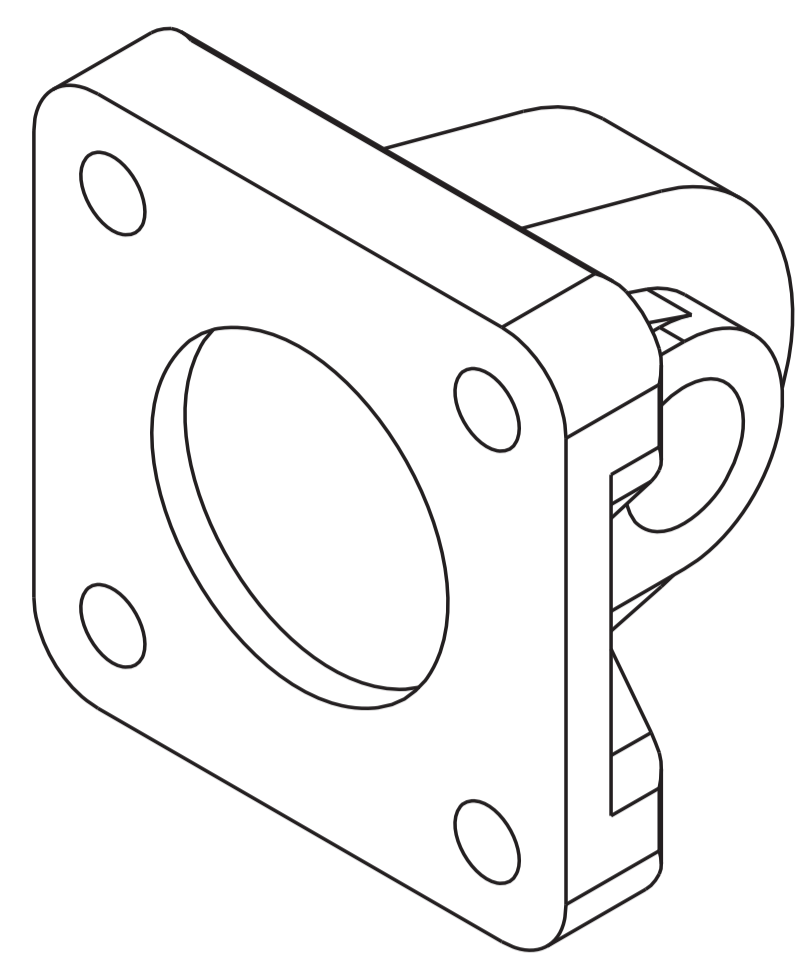


Including circlip

Material: Zinc-plated steel

| Ø | A | C | D | E | F | G | H | L | B | Mass | Part no. |
|-----|-----|-----------------------------------|-----|----|------|---|--------------------------------|----|-----|------|-----------|
| | H12 | ^{+0,5} / _{+0,3} | h13 | f7 | h11 | | ⁰ / _{-0,5} | | | | |
| 32 | 3 | 32,5 | 1,1 | 10 | 9,6 | 4 | 41 | 14 | 4,5 | 26 | KF-18032S |
| 40 | 4 | 38 | 1,1 | 12 | 11,5 | 4 | 48 | 16 | 6 | 42 | KF-18040S |
| 50 | 4 | 43 | 1,1 | 16 | 15,2 | 5 | 54 | 20 | 6 | 84 | KF-18050S |
| 63 | 4 | 49 | 1,1 | 16 | 15,2 | 5 | 60 | 20 | 6 | 94 | KF-18063S |
| 80 | 4 | 63 | 1,3 | 20 | 19 | 6 | 75 | 24 | 6 | 184 | KF-18080S |
| 100 | 4 | 73 | 1,3 | 20 | 19 | 6 | 85 | 24 | 6 | 208 | KF-18100S |
| 125 | 6 | 94 | 1,6 | 30 | 28,6 | 7 | 110 | 36 | 9 | 606 | KF-18125S |

Rear male hinge (ISO MP4)



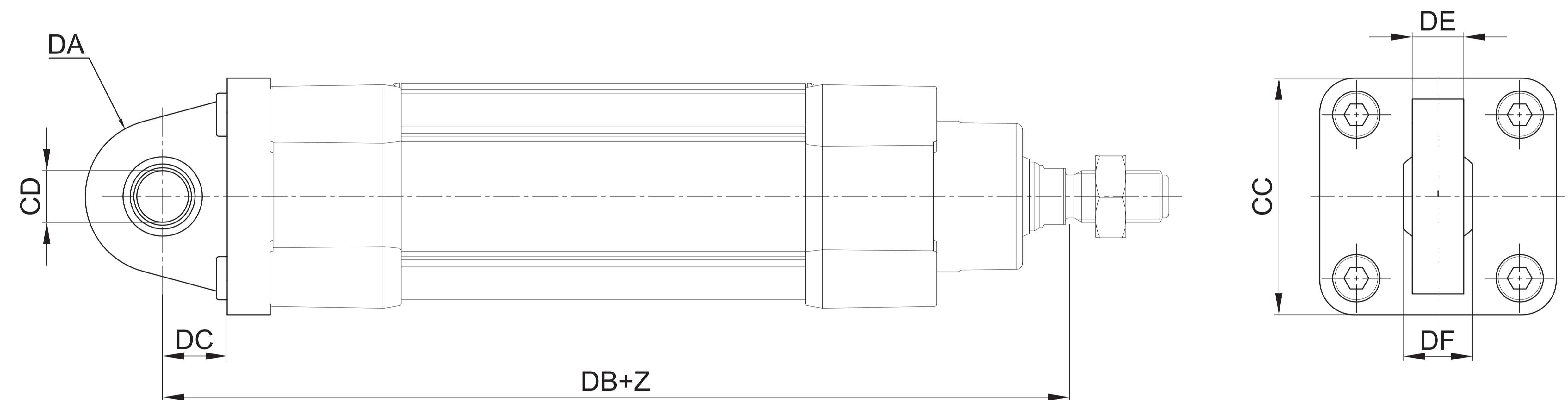
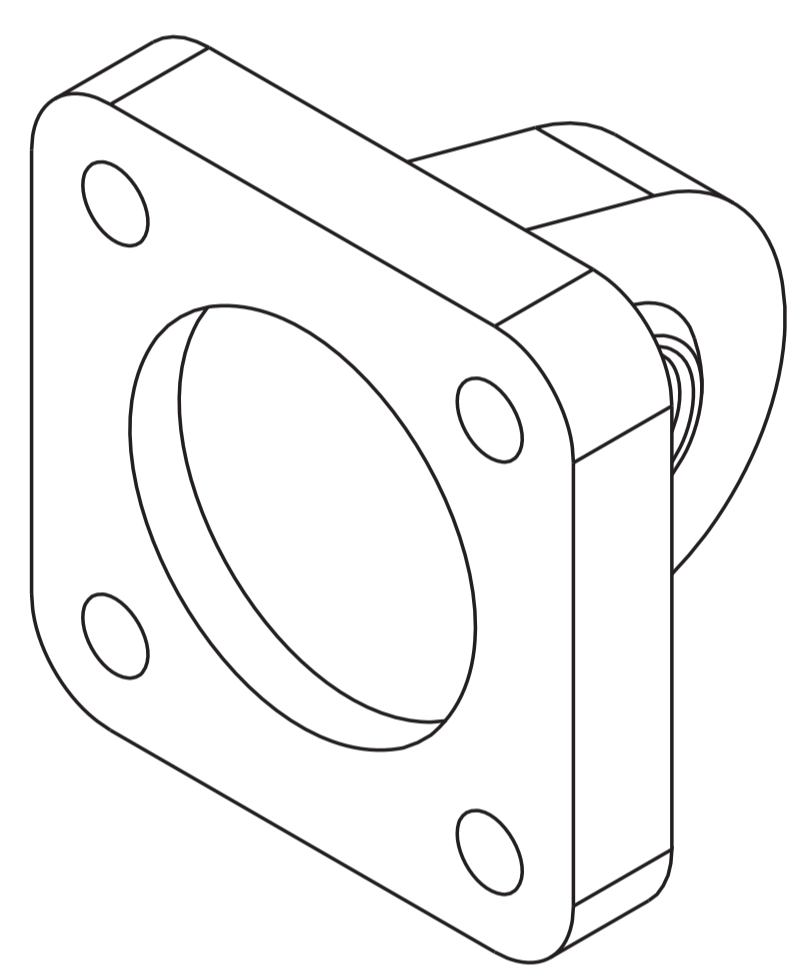
Material: Aluminium

Z = Stroke

| Ø | CD | E | EW | L | MR1 | XD | Mass | Part no. | | |
|-----|----|-----|----|-------------|-----|-------|------|----------|------|----------|
| | H9 | | | | | | | | min. | g |
| 32 | 10 | 48 | 26 | -0,2 / -0,6 | 12 | 15* | 142 | ±1,25 | 80 | KF-11032 |
| 40 | 12 | 54 | 28 | -0,2 / -0,6 | 15 | 18* | 160 | ±1,25 | 100 | KF-11040 |
| 50 | 12 | 65 | 32 | -0,2 / -0,6 | 15 | 20* | 170 | ±1,25 | 170 | KF-11050 |
| 63 | 16 | 75 | 40 | -0,2 / -0,6 | 20 | 23* | 190 | ±1,6 | 250 | KF-11063 |
| 80 | 16 | 95 | 50 | -0,2 / -0,6 | 20 | 27* | 210 | ±1,6 | 420 | KF-11080 |
| 100 | 20 | 115 | 60 | -0,2 / -0,6 | 25 | 29,5* | 230 | ±1,6 | 660 | KF-11100 |
| 125 | 25 | 140 | 70 | -0,5 / -1,2 | 30 | 26 | 275 | ±2 | 1500 | KF-11125 |

* = Non-standard dimension

Articulated rear male hinge (ISO MP6)

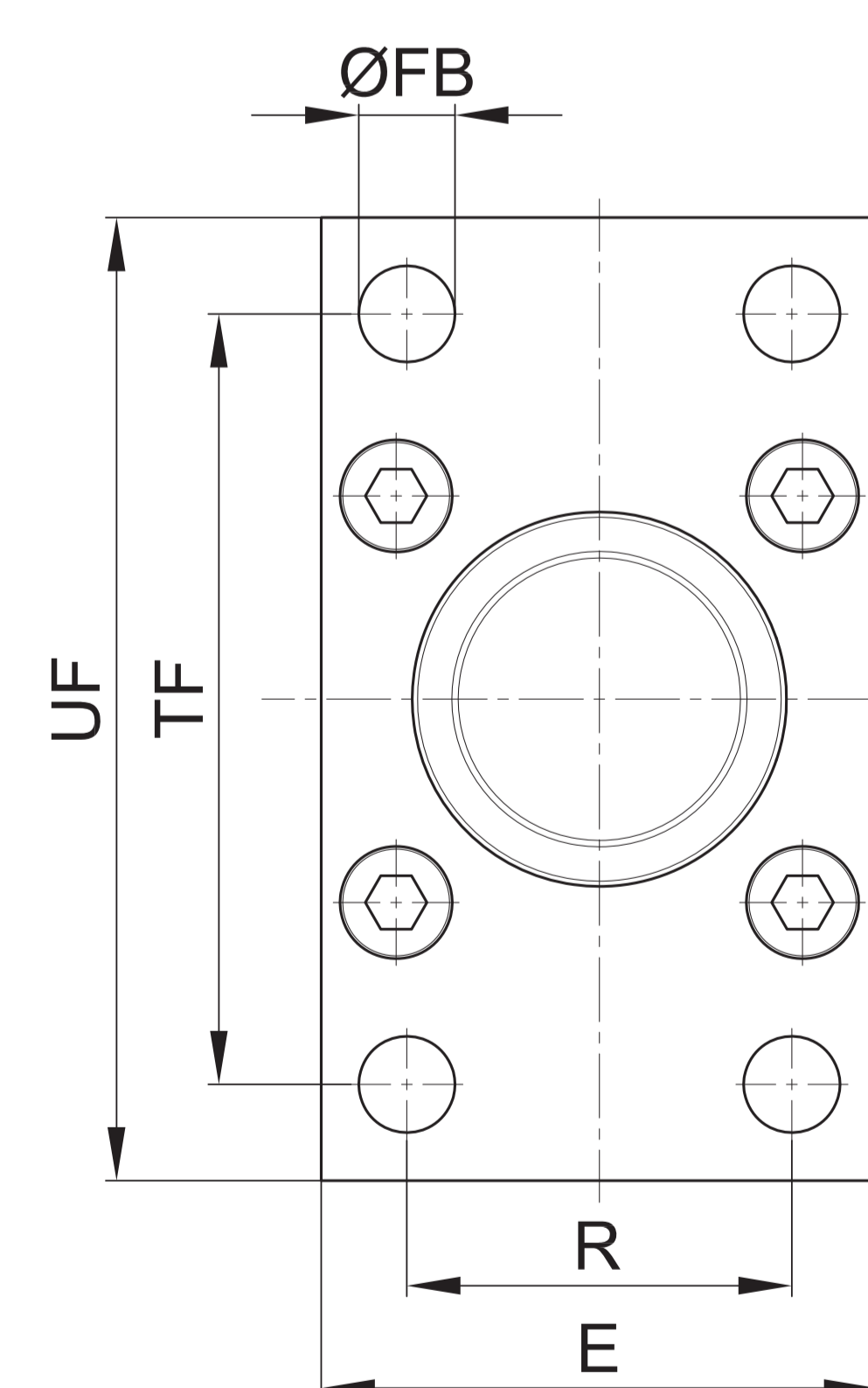
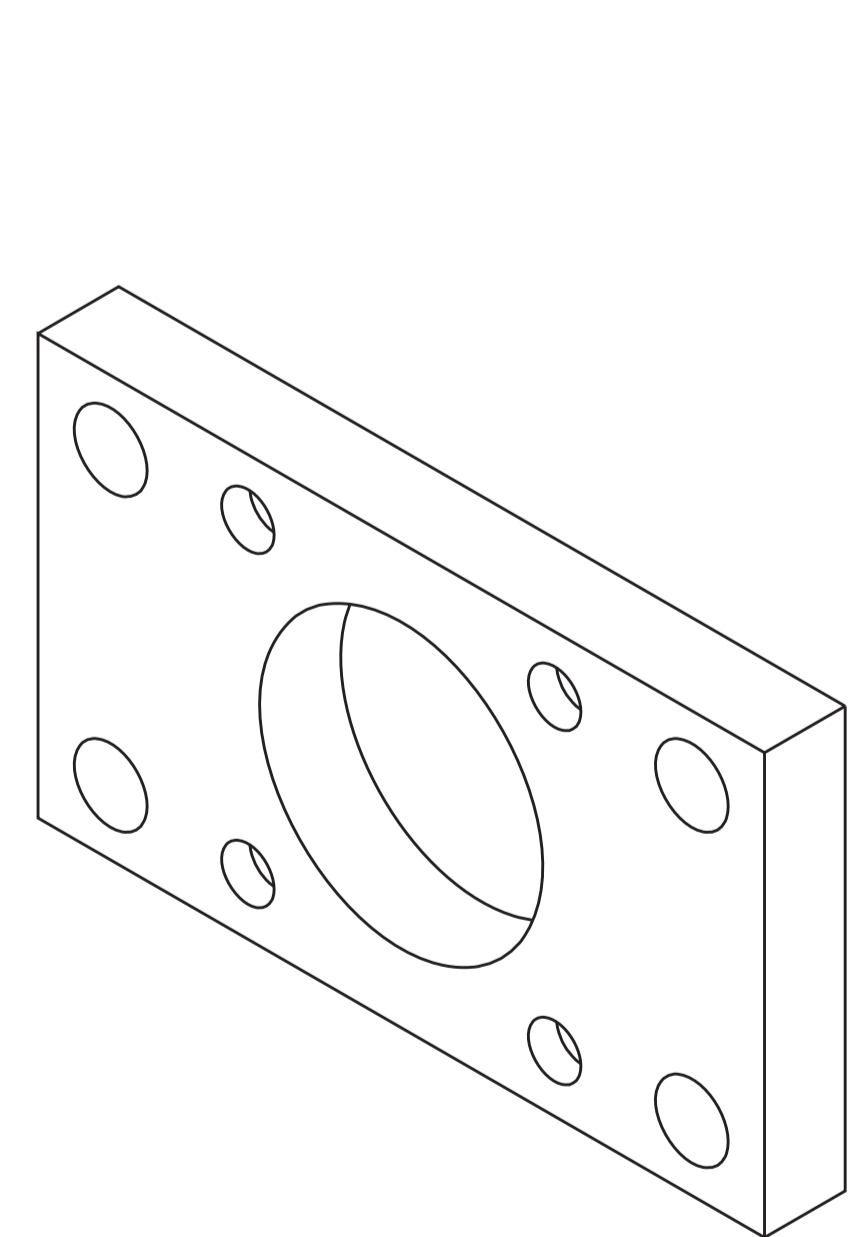


Material: Aluminium

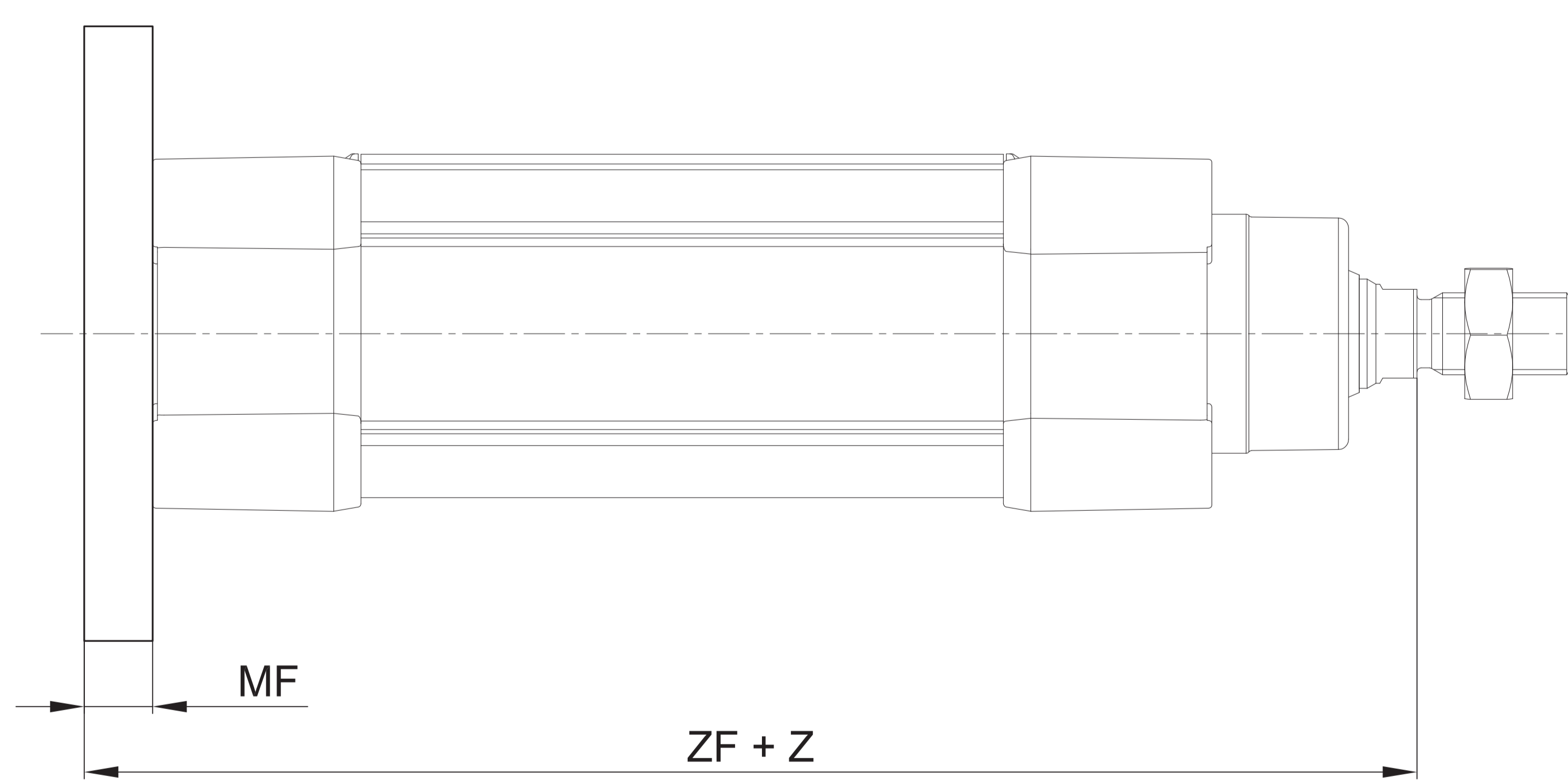
Z = Stroke

| Ø | CC | CD | DA | DB | DC | DE | DF | Mass | Part no. |
|-----|-----|----|------|-----|------|------|----|------|------------|
| | H9 | g | | | | | | | |
| 32 | 48 | 10 | 15 | 142 | 14 | 10,5 | 14 | 100 | KF-11032S |
| 40 | 54 | 12 | 18 | 160 | 16,5 | 12 | 16 | 200 | KF-11040S |
| 50 | 65 | 12 | 20 | 170 | 17,5 | 12 | 16 | 300 | KF-11050S |
| 63 | 75 | 16 | 21 | 190 | 21,5 | 15 | 21 | 350 | KF-11063S |
| 80 | 95 | 16 | 27 | 210 | 24 | 15 | 21 | 1600 | KF-1 1080S |
| 100 | 115 | 20 | 29,5 | 230 | 28 | 18 | 25 | 700 | KF-11100S |
| 125 | 140 | 30 | 40 | 275 | 30 | 25 | 37 | 1410 | KF-11125S |

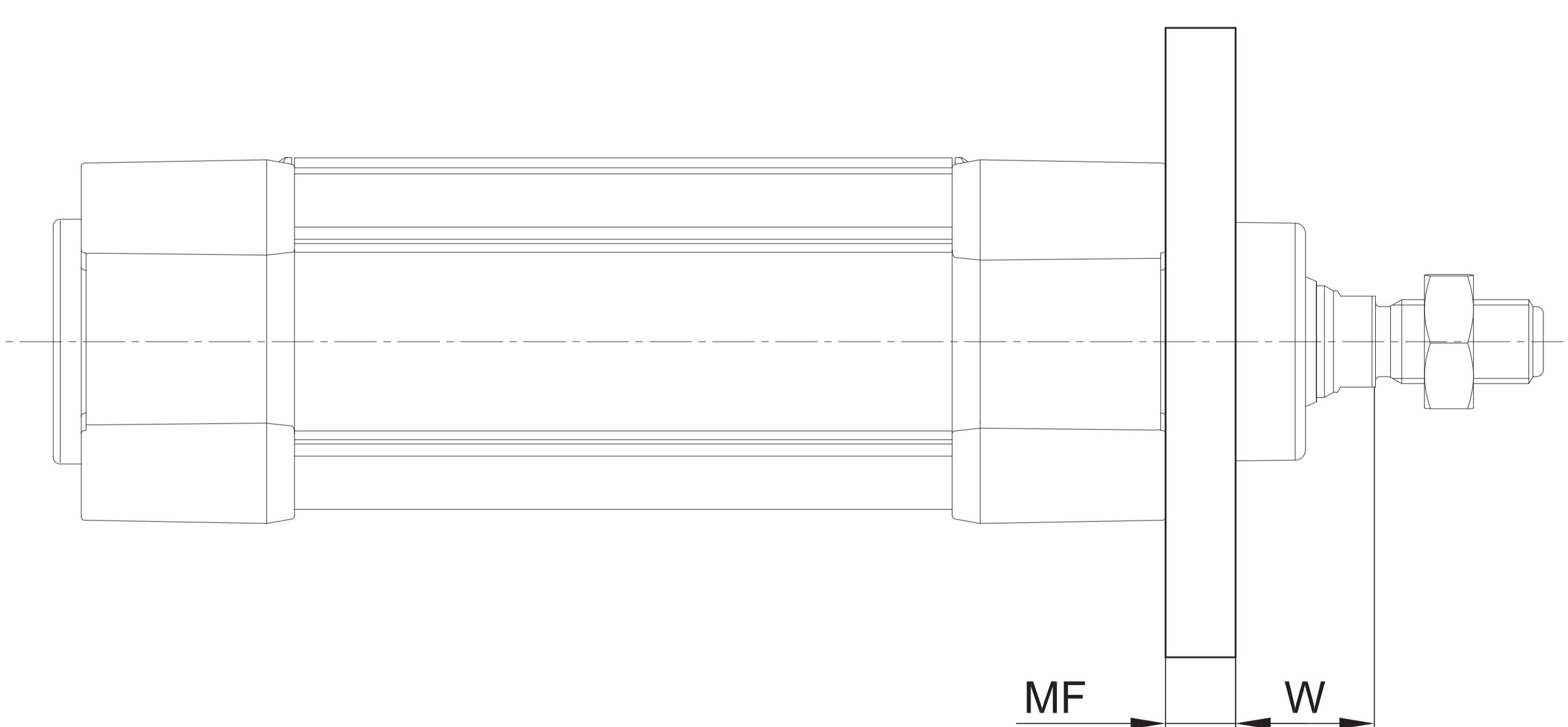
Front/rear flange (ISO MF1-MF2)



> Rear assembly



> Front assembly

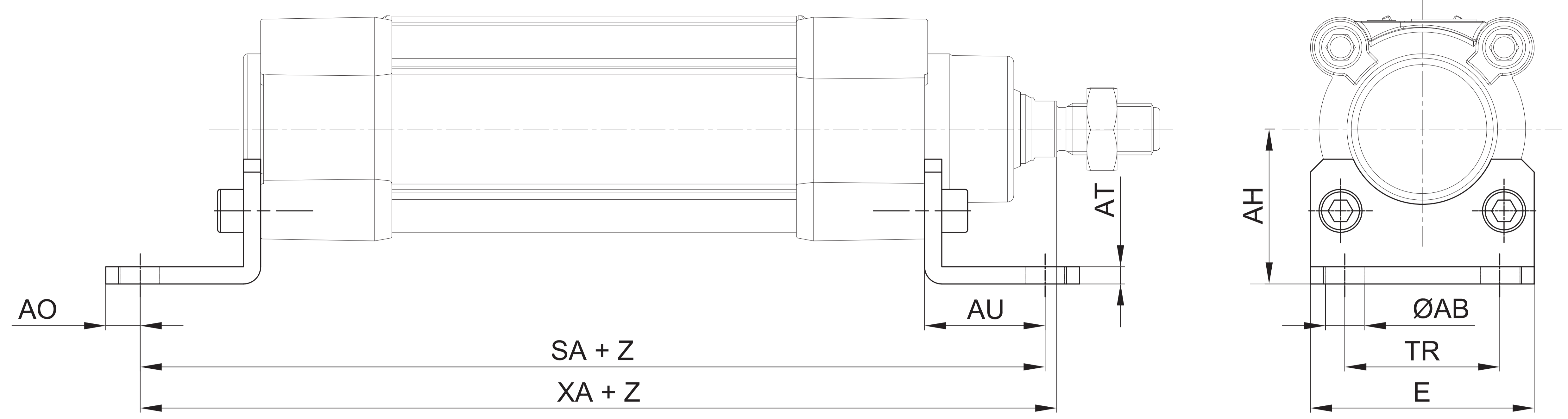
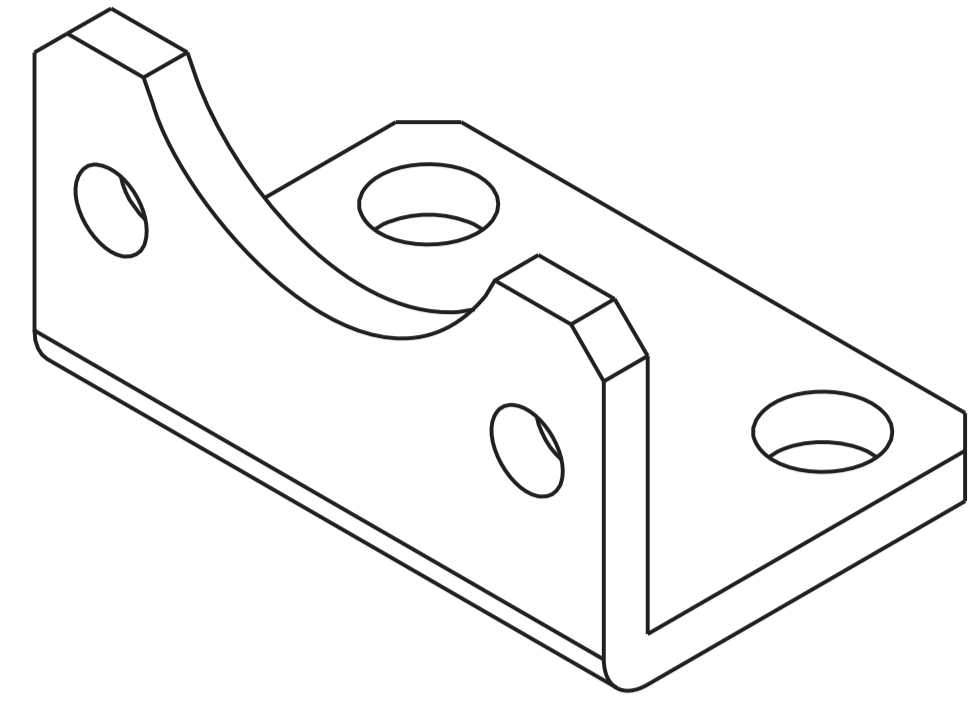


Material: Zinc-plated steel

Z = Stroke

| Ø | E | ØFB | MF | R | TF | UF | W | ZF | Mass | Part no. | | |
|-----|-----|------|------|------|-----|-----|----|------|------|----------|------|----------|
| | H13 | ±0,2 | JS14 | JS14 | Max | g | | | | | | |
| 32 | 45 | 7 | 10 | 32 | 64 | 80 | 16 | ±1,6 | 130 | ±1,25 | 200 | KF-12032 |
| 40 | 52 | 9 | 10 | 36 | 72 | 90 | 20 | ±1,6 | 145 | ±1,25 | 250 | KF-12040 |
| 50 | 65 | 9 | 12 | 45 | 90 | 110 | 25 | ±2 | 155 | ±1,25 | 500 | KF-12050 |
| 63 | 75 | 9 | 12 | 50 | 100 | 120 | 25 | ±2 | 170 | ±1,6 | 650 | KF-12063 |
| 80 | 95 | 12 | 16 | 63 | 126 | 150 | 30 | ±2 | 190 | ±1,6 | 1500 | KF-12080 |
| 100 | 115 | 14 | 16 | 75 | 150 | 170 | 35 | ±2 | 205 | ±1,6 | 2200 | KF-12100 |
| 125 | 140 | 16 | 20 | 90 | 180 | 205 | 45 | ±2,5 | 245 | ±2 | 4100 | KF-12125 |

Angle bracket (ISO MS1)

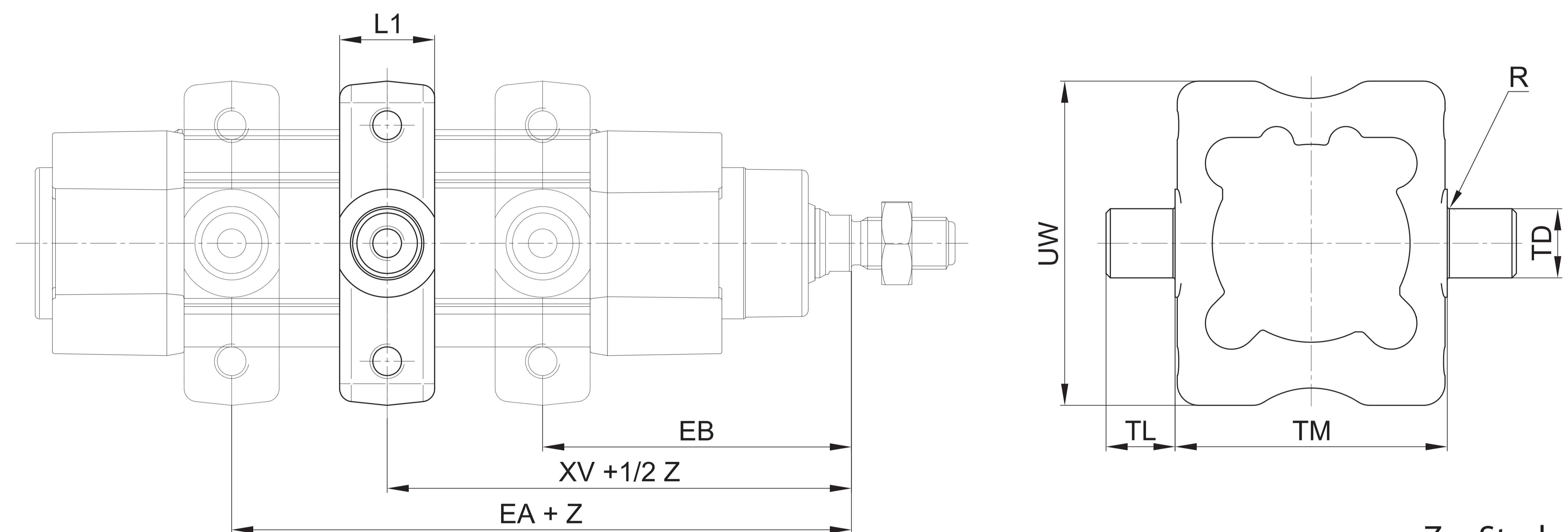
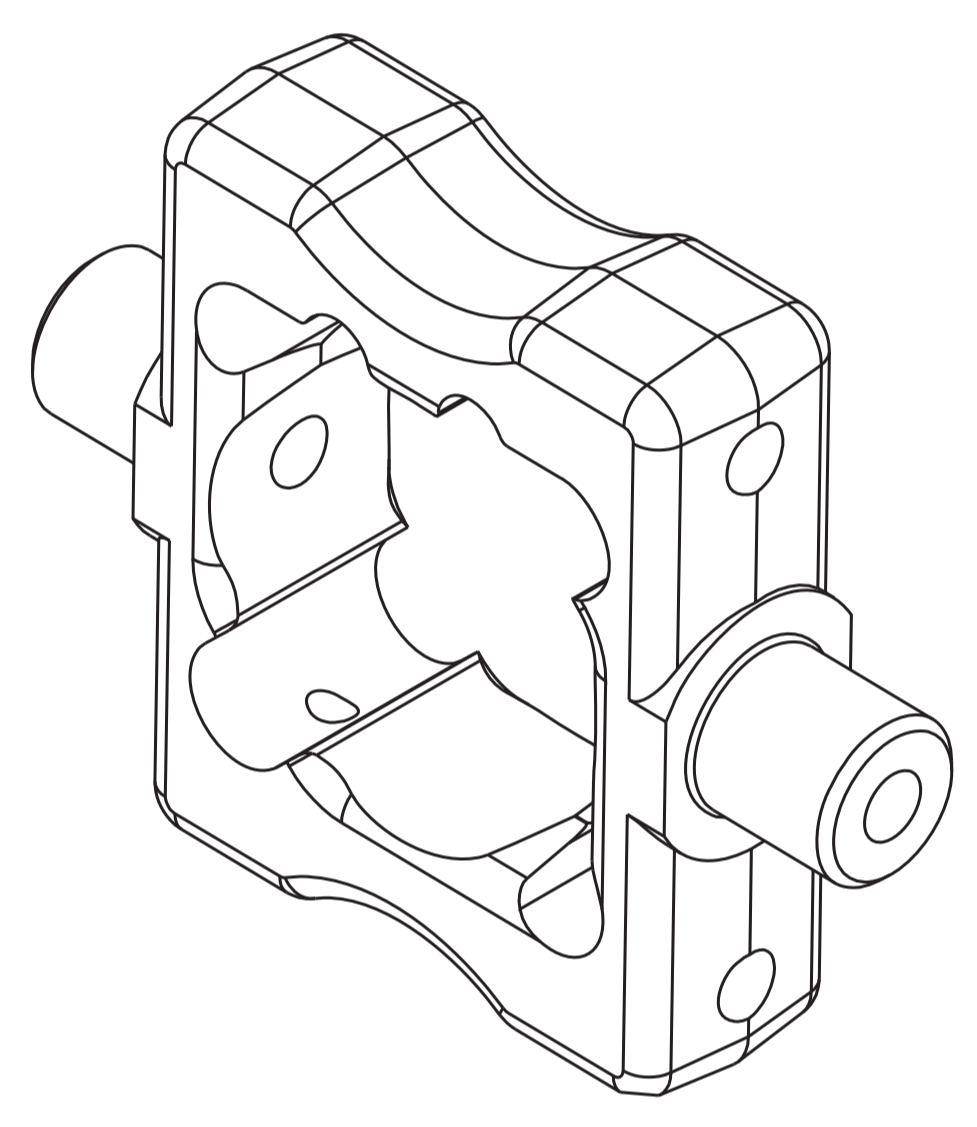


Material: Zinc-plated steel

Z = Stroke

| Ø | ØAB | AH | AO | AT | AU | E | SA | TR | XA | Mass | Part no. | | |
|-----|-----|------|----|----|------|-----|-----|-------|----|------|----------|------|----------|
| | H13 | JS15 | | | ±0,2 | | | JS14 | | g | | | |
| 32 | 7 | 32 | 6 | 4 | 24 | 45 | 142 | ±1,25 | 32 | 144 | ±1,25 | 55 | KF-13032 |
| 40 | 9 | 36 | 8 | 4 | 28 | 52 | 161 | ±1,25 | 36 | 163 | ±1,25 | 80 | KF-13040 |
| 50 | 9 | 45 | 10 | 5 | 32 | 64 | 170 | ±1,25 | 45 | 175 | ±1,25 | 146 | KF-13050 |
| 63 | 9 | 50 | 12 | 5 | 32 | 74 | 185 | ±1,6 | 50 | 190 | ±1,6 | 175 | KF-13063 |
| 80 | 12 | 63 | 15 | 6 | 41 | 94 | 210 | ±1,6 | 63 | 215 | ±1,6 | 390 | KF-13080 |
| 100 | 14 | 71 | 20 | 6 | 41 | 114 | 220 | ±1,6 | 75 | 230 | ±1,6 | 525 | KF-13100 |
| 125 | 16 | 90 | 15 | 8 | 45 | 140 | 250 | ±2 | 90 | 270 | ±2 | 1040 | KF-13125 |

ISO intermediate hinge (ISO MT4)



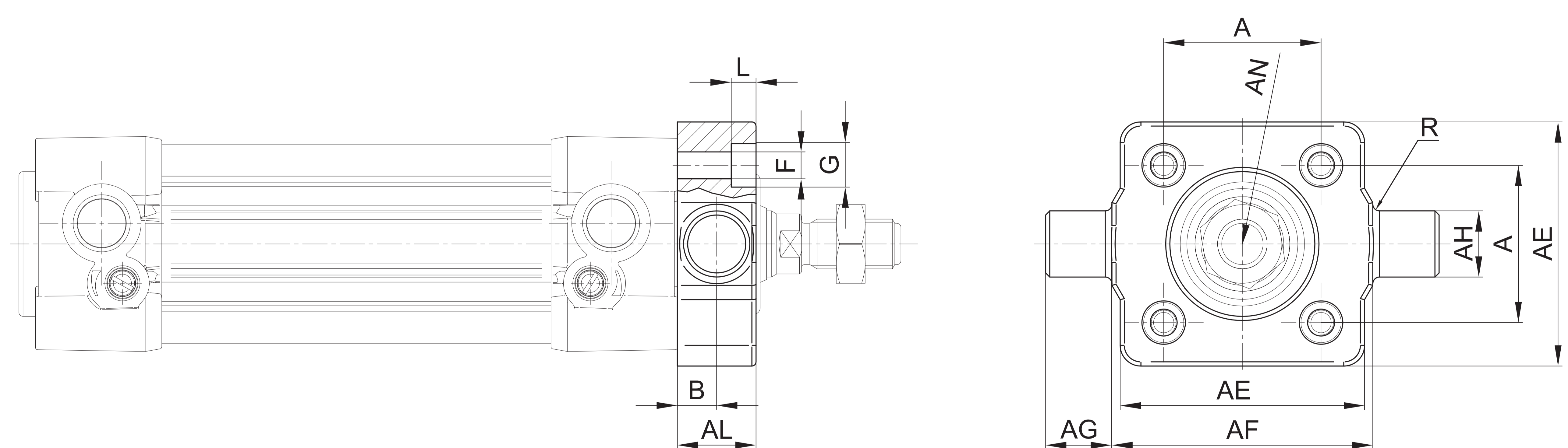
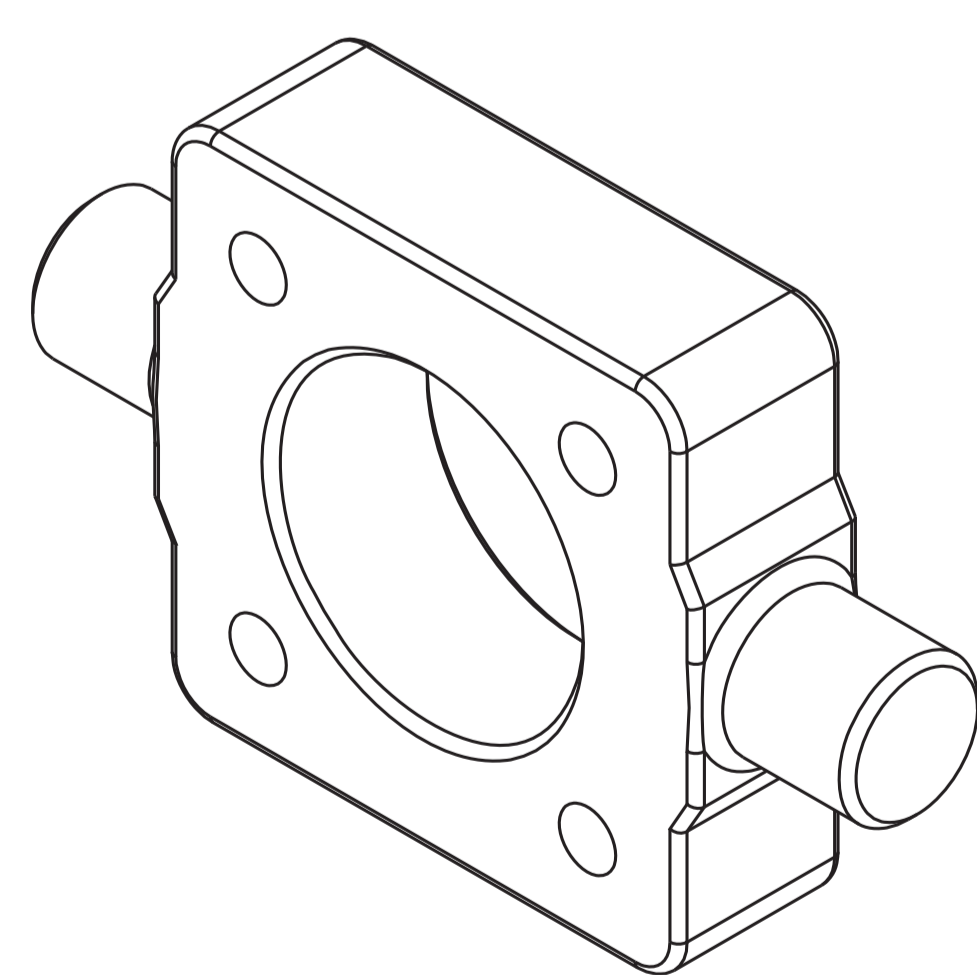
Material: Zinc-plated steel

Z = Stroke

| Ø | EA | EB | L1 | R | TD | TL | TM | UW | XV | Mass | Part no. | |
|-----|-----|------|------|-----|----|-----|-----|-----|------|------|----------|-----------|
| | Max | min. | | | e9 | h14 | h14 | | | g | | |
| 32 | 82 | 64 | 22 | 0,5 | 12 | 12 | 50 | 65 | 73 | ±2 | 20,2 | KLF-14032 |
| 40 | 93 | 72 | 22 | 0,5 | 16 | 16 | 63 | 75 | 82,5 | ±2 | 34,8 | KLF-14040 |
| 50 | 101 | 79 | 22 | 0,5 | 16 | 16 | 75 | 95 | 90 | ±2 | 53 | KLF-14050 |
| 63 | 107 | 88 | 27,5 | 1 | 20 | 20 | 90 | 105 | 97,5 | ±2 | 79,2 | KLF-14063 |
| 80 | 123 | 97 | 27,5 | 1,5 | 20 | 20 | 110 | 130 | 110 | ±2 | 118,6 | KLF-14080 |
| 100 | 131 | 109 | 33 | 1 | 25 | 25 | 132 | 145 | 120 | ±2 | 179,2 | KLF-14100 |
| 125 | 164 | 126 | 33 | 1 | 25 | 25 | 160 | 175 | 145 | ±2,5 | 251,2 | KLF-14125 |

The dimension XV + 1/2 indicates the position of the hinge between the end-caps of the cylinder

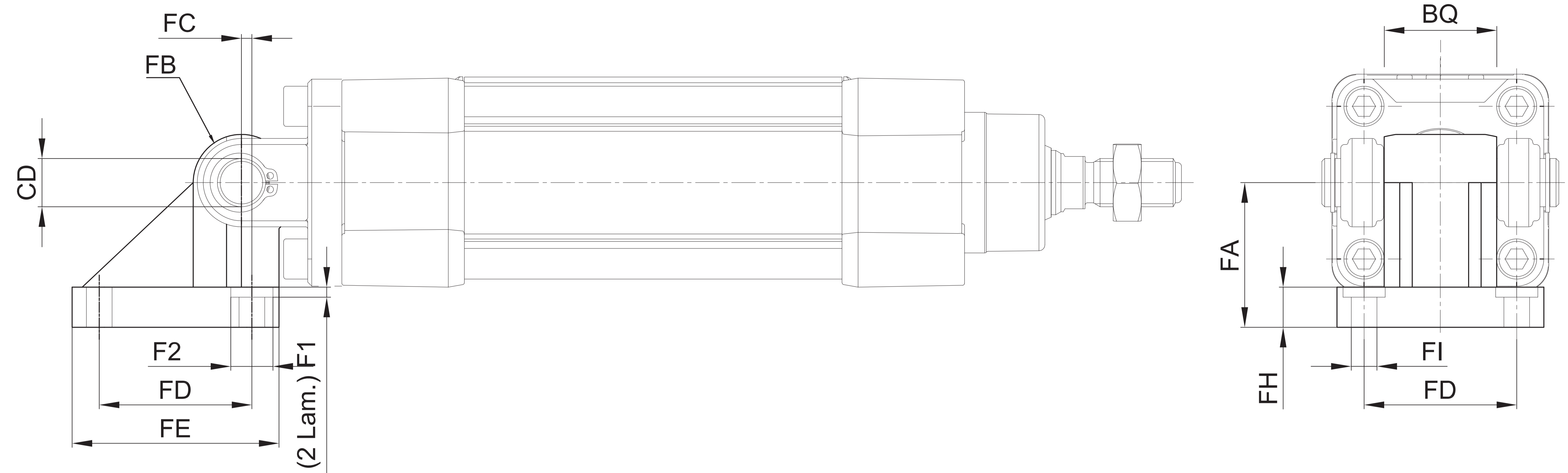
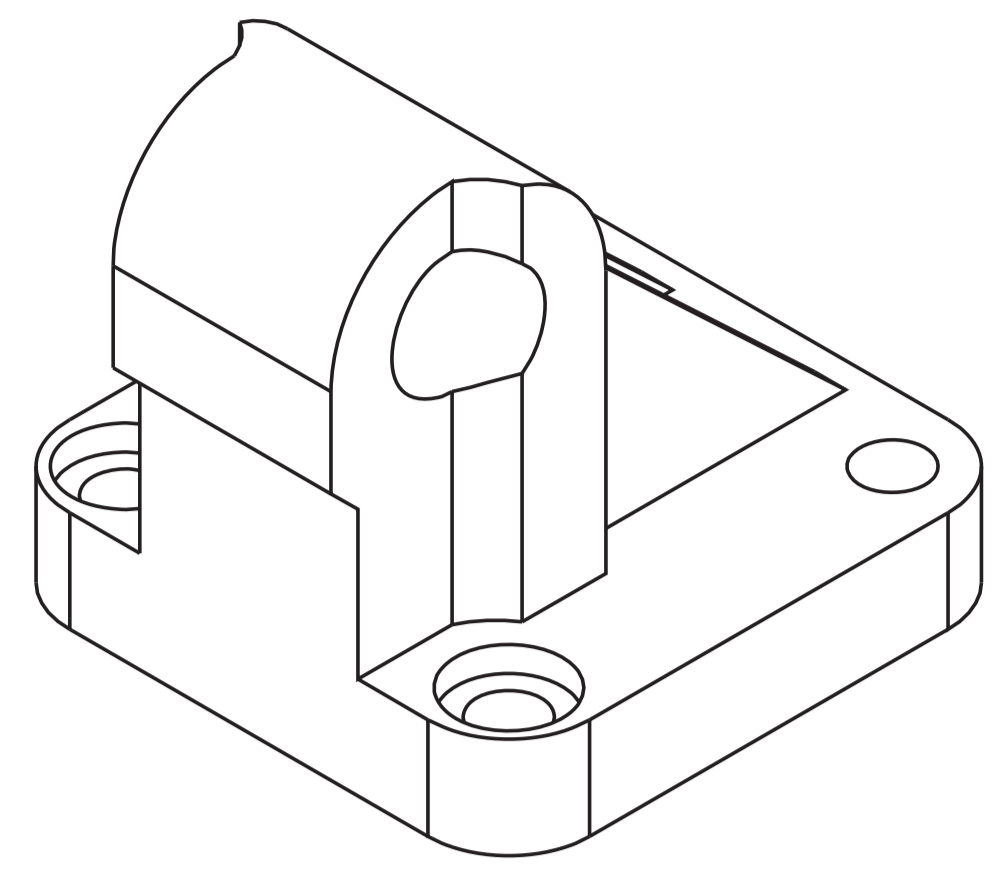
Front/rear hinge with floating pin



Material: Zinc-plated steel

| Ø | AE | AL | AH | AG | AF | AN | A | B | F | G | L | R | Mass | Part no. |
|-----|-----|-----|----|-----|-----|-----|------|--------------------------------|------|------|--------------------------------|--------------------------------|------|------------|
| | Max | Max | e9 | h14 | h14 | h11 | ±0,2 | ^{+0,2} / ₀ | H13 | H13 | ^{+0,5} / ₀ | ⁰ / _{+0,3} | g | |
| 32 | 46 | 14 | 12 | 12 | 50 | 30 | 32,5 | 6,5 | 6,5 | - | 6 | 1 | 137 | KF-14032AP |
| 40 | 59 | 19 | 16 | 16 | 63 | 35 | 38 | 9 | 6,5 | 10,5 | 6 | 1,6 | 385 | KF-14040AP |
| 50 | 69 | 19 | 16 | 16 | 75 | 40 | 46,5 | 9 | 8,5 | 13,5 | 8 | 1,6 | 513 | KF-14050AP |
| 63 | 84 | 24 | 20 | 20 | 90 | 45 | 56,5 | 11,5 | 8,5 | 13,5 | 8 | 1,6 | 1041 | KF-14063AP |
| 80 | 102 | 24 | 20 | 20 | 110 | 45 | 72 | 11,5 | 10,5 | 16,5 | 10 | 1,6 | 1567 | KF-14080AP |
| 100 | 125 | 29 | 25 | 25 | 132 | 55 | 89 | 14 | 10,5 | 16,5 | 10 | 2 | 3000 | KF-14100AP |
| 125 | 155 | 32 | 25 | 25 | 160 | 133 | 110 | - | 13,5 | 20 | 12 | 2 | 2400 | KF-14125AP |

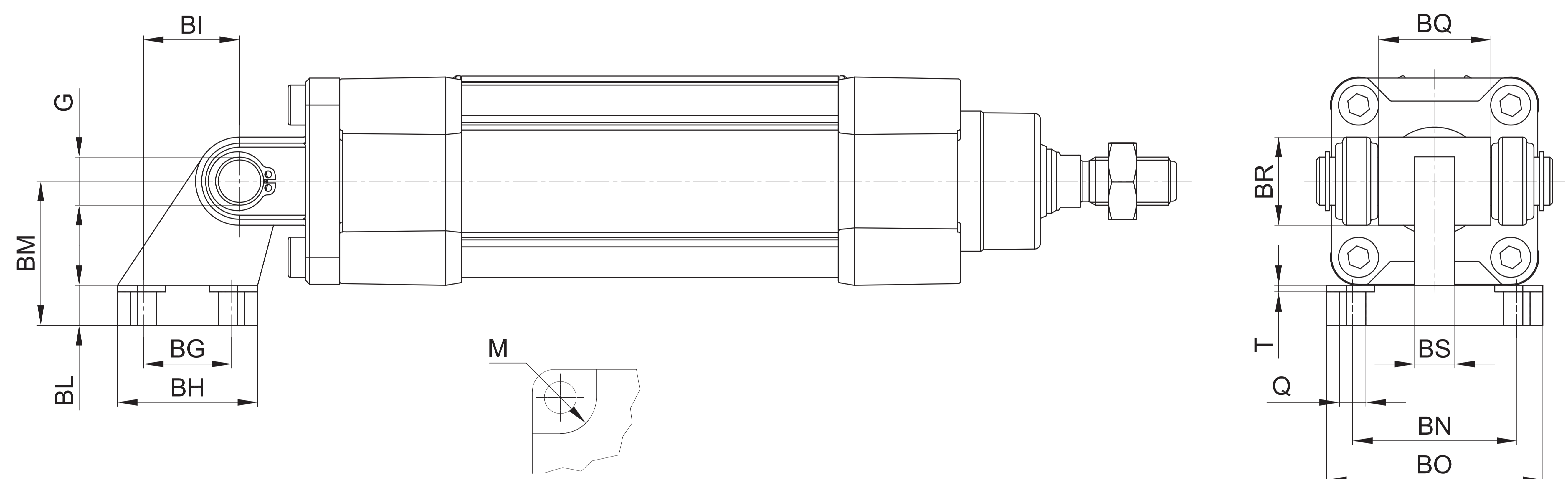
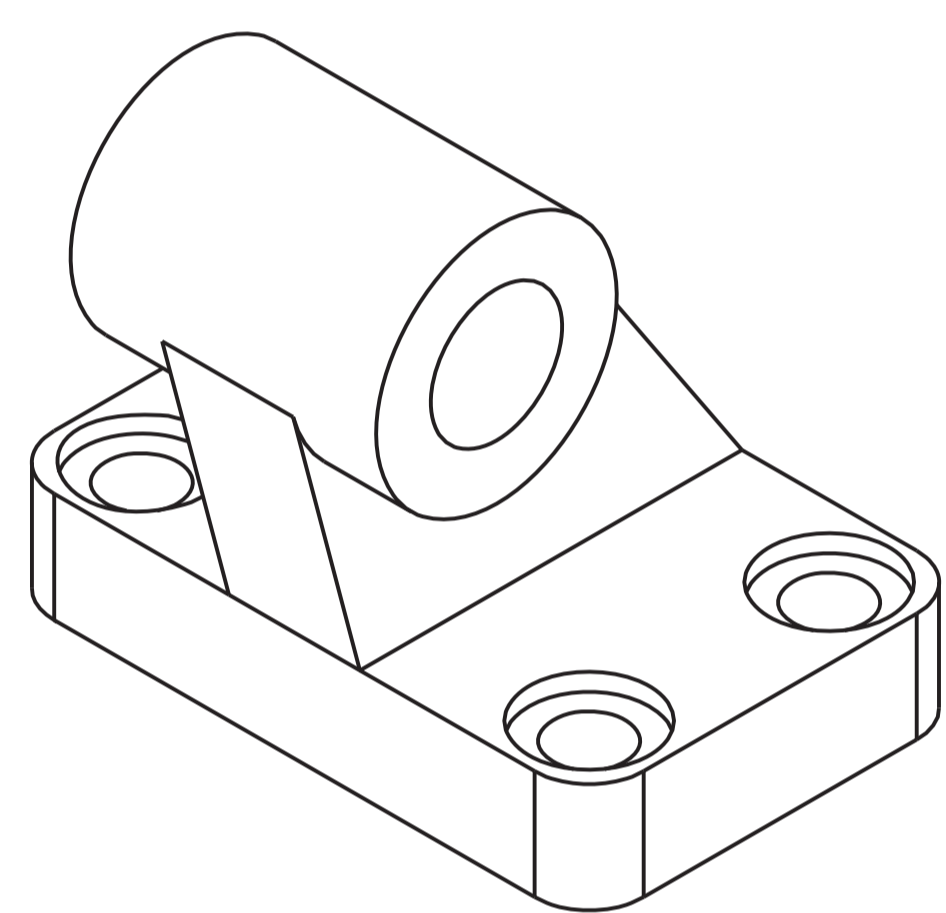
Counter hinge 90°



Material: Aluminium

| Ø | CD | FA | FB | FC | FD | FE | FH | FI | F1 | F2 | BQ | Mass | Part no. |
|-----|----|----|----|-----|------|------|------|------|-----|------|----|------|----------|
| | H9 | | | | | | | | | | | g | |
| 32 | 10 | 32 | 10 | 1,2 | 32,5 | 46,5 | 9 | 6,4 | 5,5 | 10,5 | 26 | 90 | KF-19032 |
| 40 | 12 | 36 | 12 | 2,6 | 38 | 51,5 | 9 | 6,4 | 5,5 | 10,5 | 28 | 120 | KF-19040 |
| 50 | 12 | 45 | 12 | 0,3 | 46,5 | 63,5 | 9 | 8,4 | 5 | 13,5 | 32 | 200 | KF-19050 |
| 63 | 16 | 50 | 16 | 3,3 | 56,5 | 73,5 | 10,5 | 8,4 | 5 | 13,5 | 40 | 320 | KF-19063 |
| 80 | 16 | 63 | 16 | 1,0 | 72 | 93 | 12 | 10,5 | 4,5 | 16,5 | 50 | 580 | KF-19080 |
| 100 | 20 | 73 | 20 | 2,5 | 89 | 113 | 13 | 10,5 | 4,5 | 16,5 | 60 | 910 | KF-19100 |

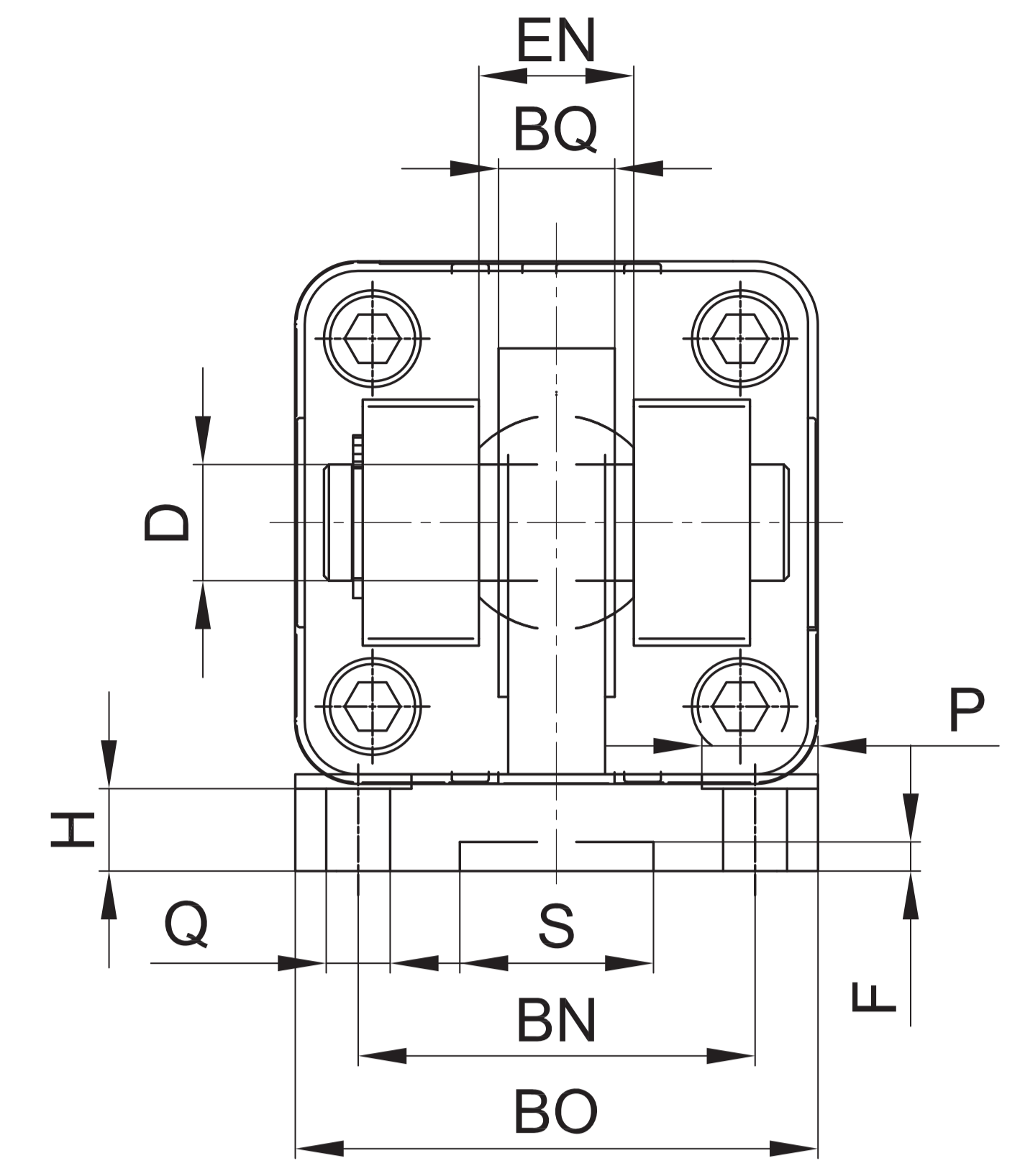
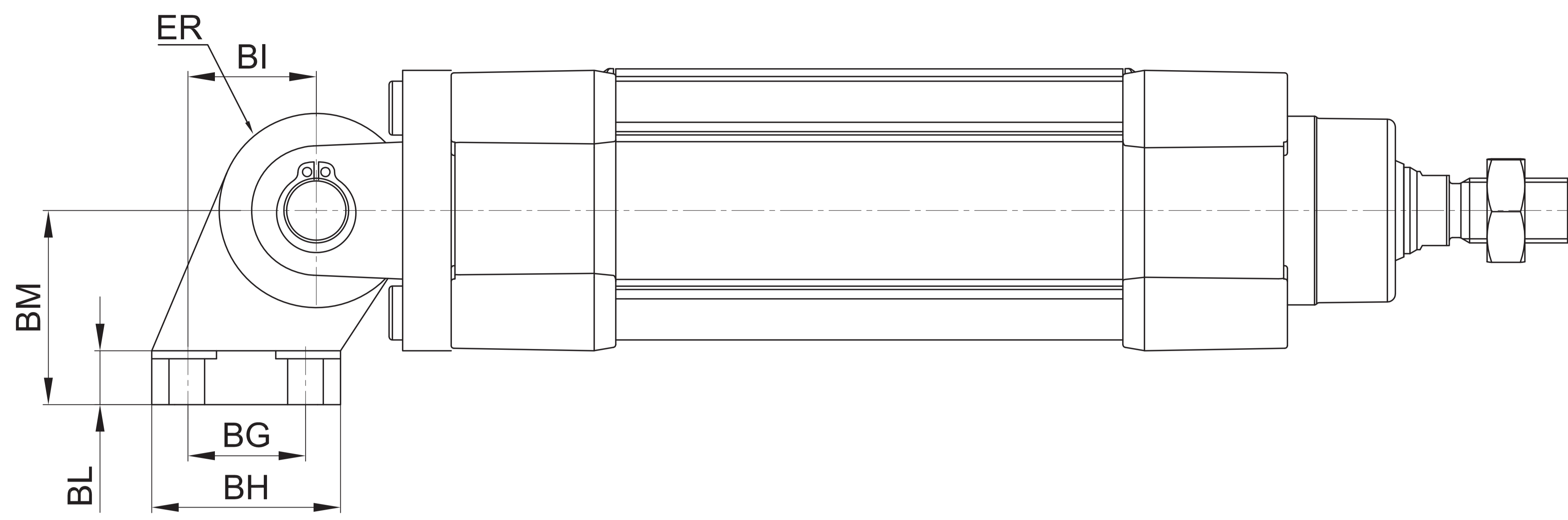
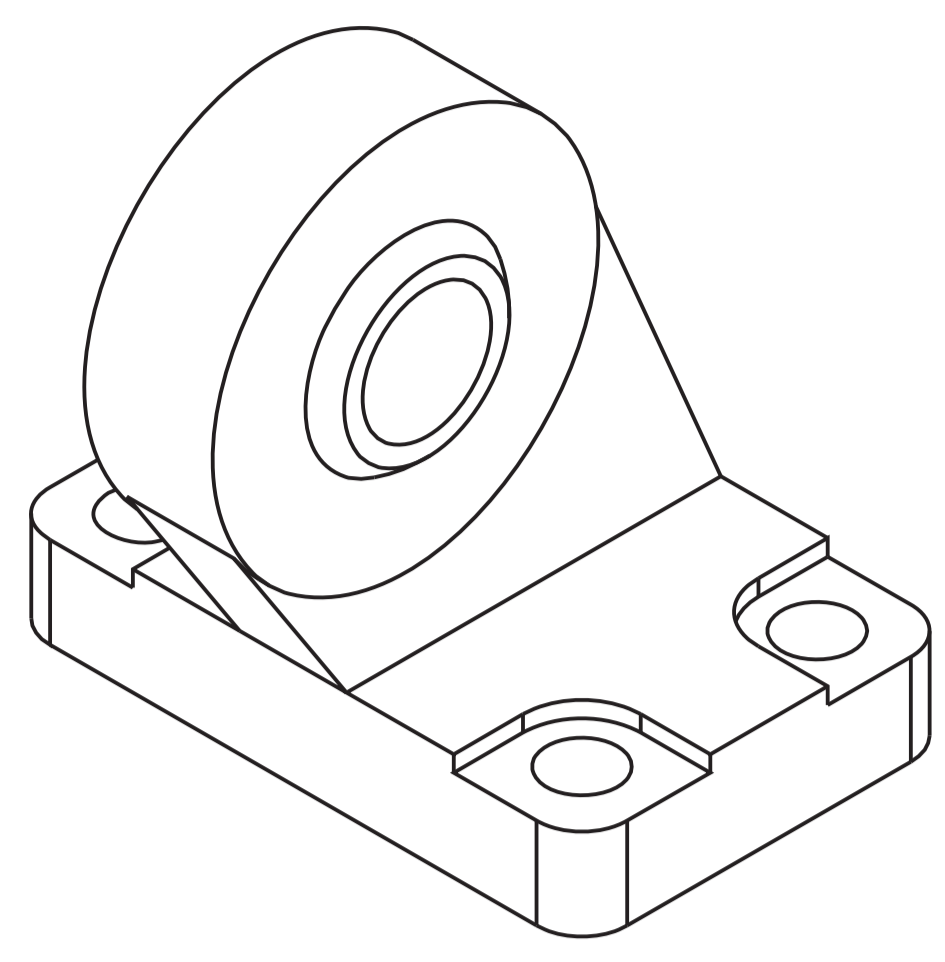
Counter hinge 90° (CETOP RP107P)



Material: Aluminium

| Ø | Q | M | BG | BH | BI | BL | BM | BN | BO | BS | BR | T | G | S | F | BQ | Mass | Part no. |
|-----|-----|-----|------|-----|------|----|------|------|-----|-----|-----|-----|----|--------|--------|----|------|-------------|
| | H13 | H13 | JS14 | Max | JS14 | | JS15 | JS14 | Max | Max | Max | Max | H9 | +0,5/0 | +0,5/0 | | g | |
| 32 | 6,6 | 11 | 18 | 31 | 21 | 8 | 32 | 38 | 51 | 10 | 20 | 1,6 | 10 | 10,5 | 3 | 26 | 56 | KF-19032CTA |
| 40 | 6,6 | 11 | 22 | 35 | 24 | 10 | 36 | 41 | 54 | 15 | 22 | 1,6 | 12 | 10,5 | 3 | 28 | 139 | KF-19040CTA |
| 50 | 9 | 15 | 30 | 45 | 33 | 12 | 45 | 50 | 65 | 16 | 26 | 1,6 | 12 | 10,5 | 3 | 32 | 142 | KF-19050CTA |
| 63 | 9 | 15 | 35 | 50 | 37 | 14 | 50 | 52 | 67 | 16 | 30 | 1,6 | 16 | 10,5 | 3 | 40 | 200 | KF-19063CTA |
| 80 | 11 | 18 | 40 | 60 | 47 | 14 | 63 | 66 | 86 | 20 | 30 | 2,5 | 16 | 10,5 | 3 | 50 | 321 | KF-19080CTA |
| 100 | 11 | 18 | 50 | 70 | 55 | 17 | 71 | 76 | 96 | 20 | 38 | 2,5 | 20 | 10,5 | 3 | 60 | 656 | KF-19100CTA |
| 125 | 14 | 20 | 60 | 90 | 70 | 20 | 90 | 94 | 124 | 30 | 45 | 3,2 | 25 | 10,5 | 3 | 70 | 826 | KF-19125CTA |

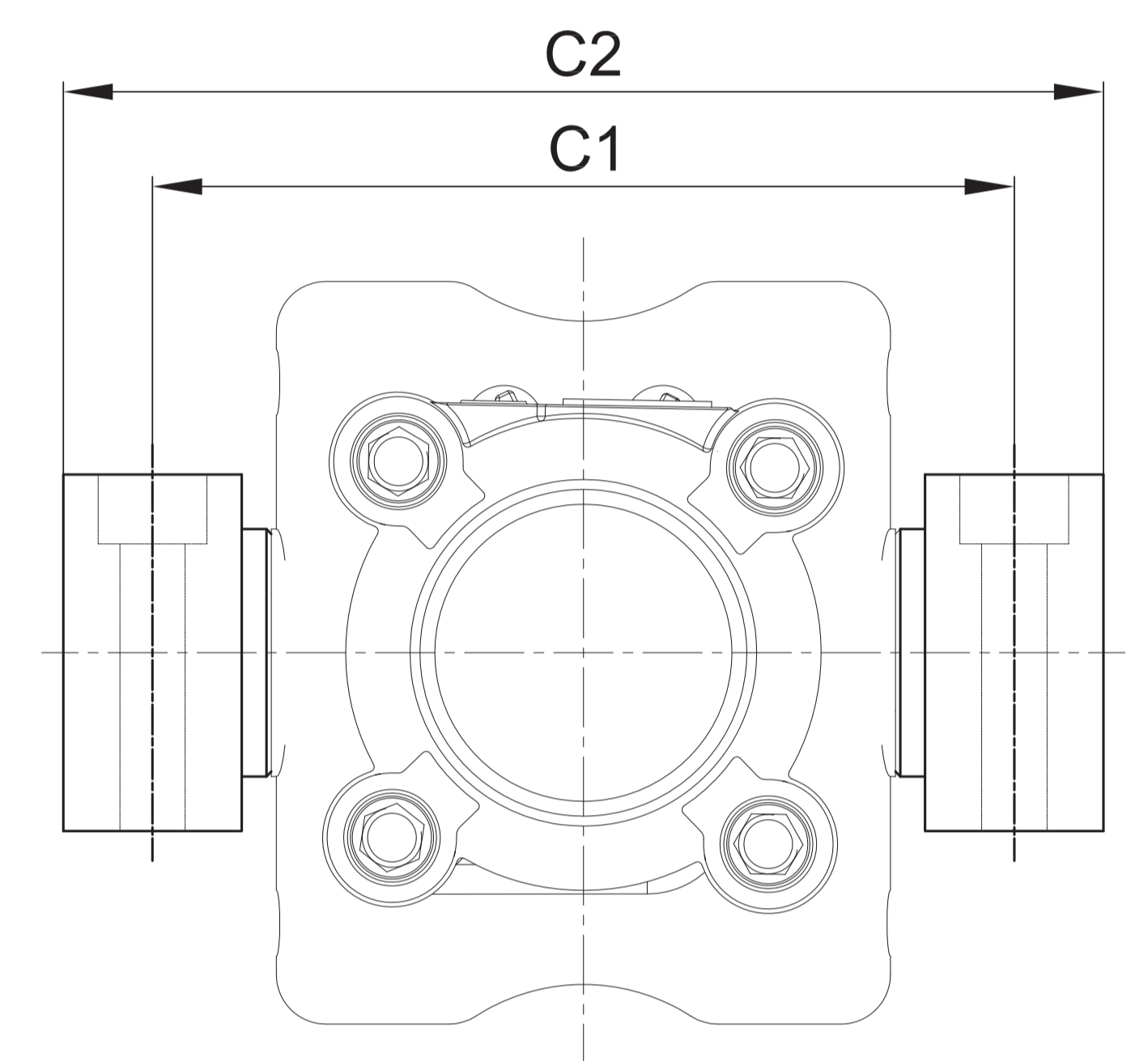
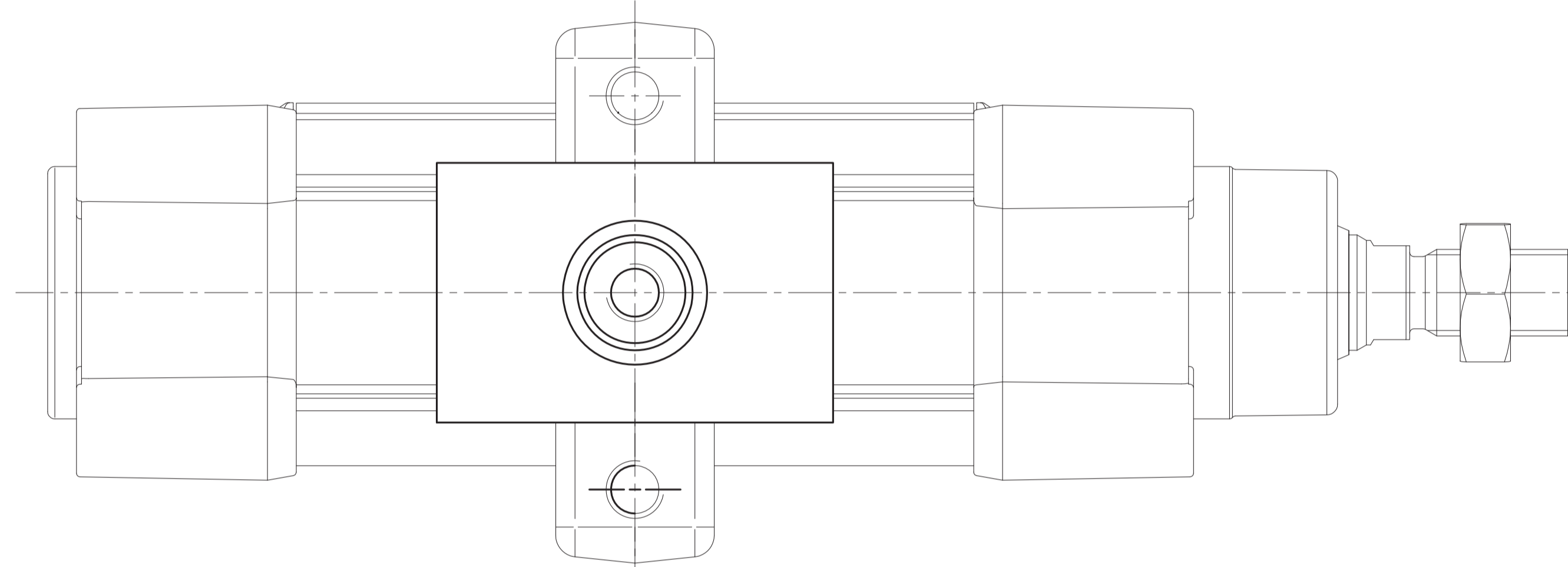
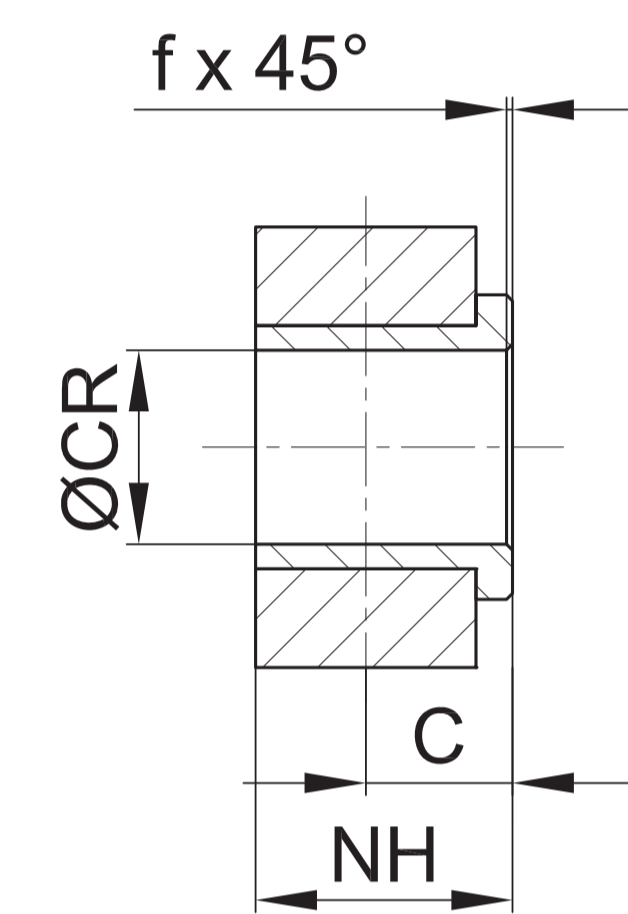
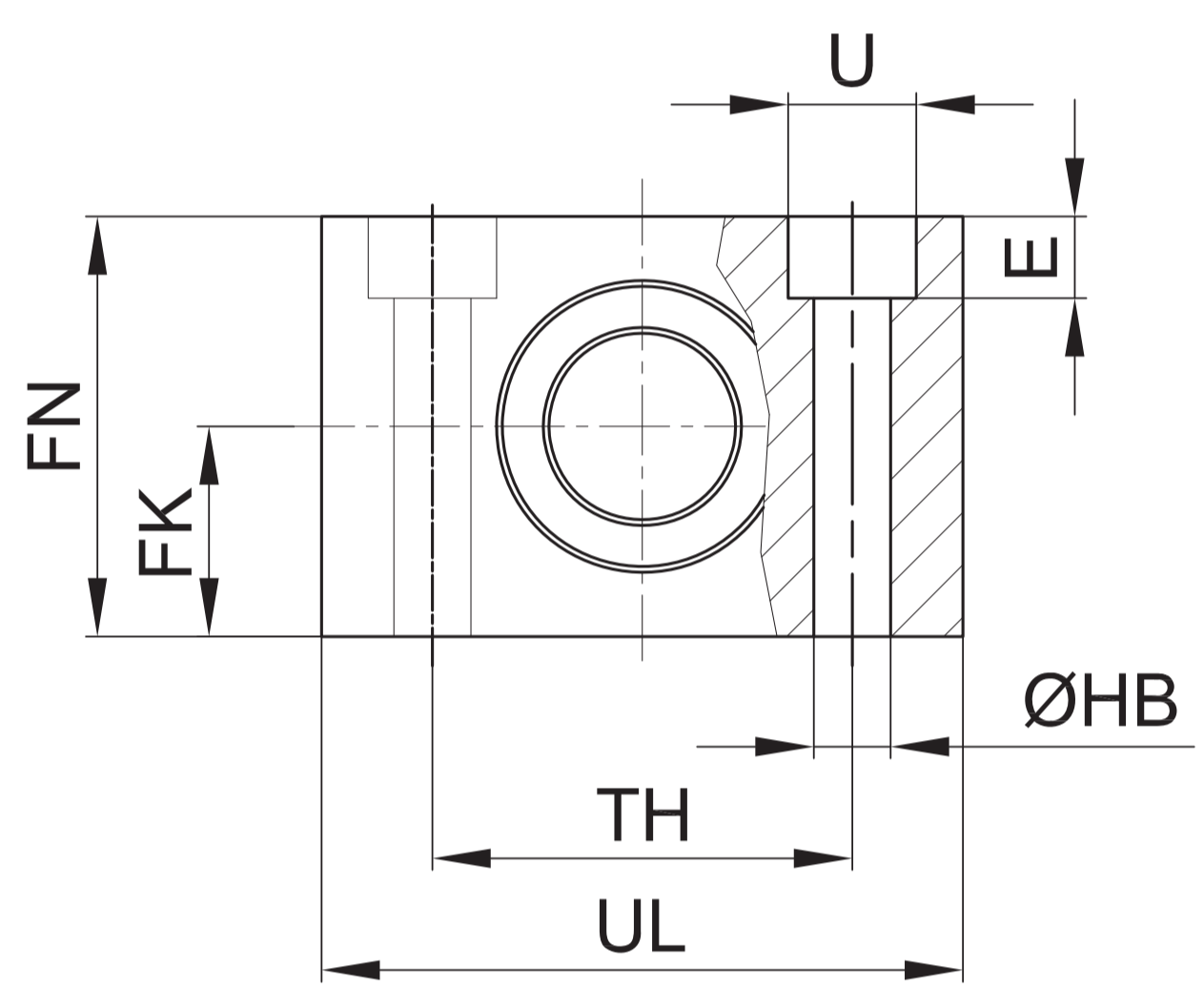
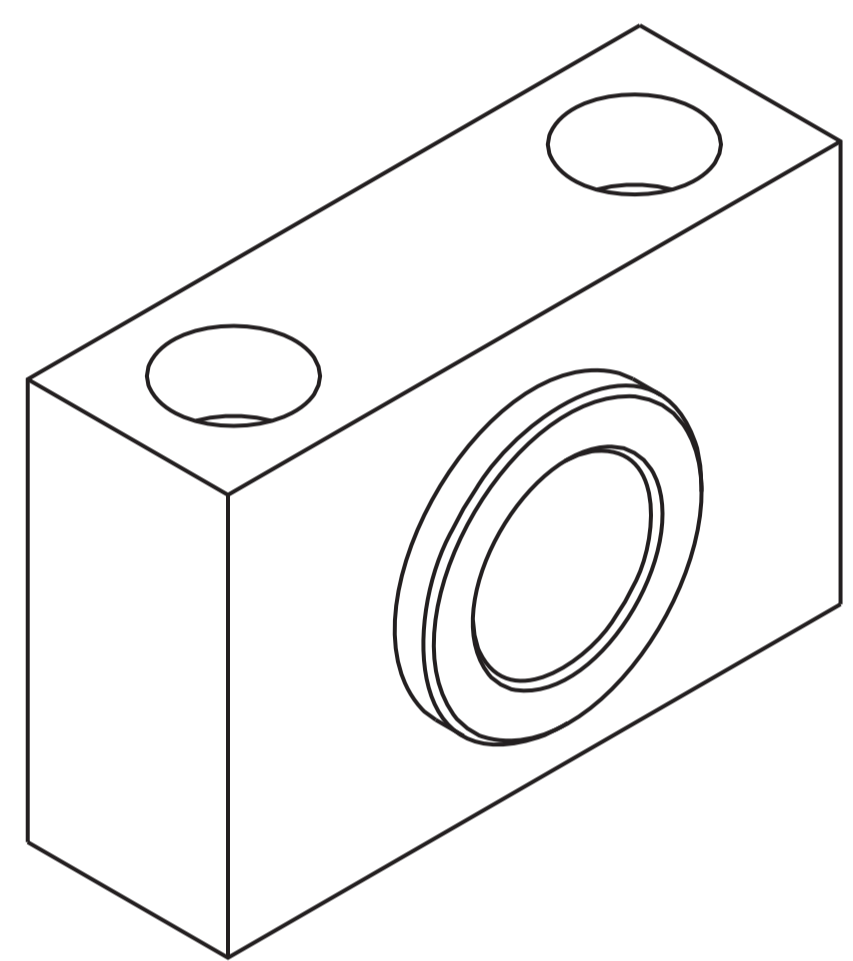
Articulated counter hinge (DIN648K)



Material: Aluminium

| Ø | Q | P | BG | BH | BI | BL | BM | BN | BO | EN | ER | BQ | D | H | S | F | Mass | Part no. |
|-----|------|-----|------|-----|------|----|------|------|-----|--------|-----|------|----|--------|-----|---|------|------------|
| | H13 | H13 | JS14 | Max | JS15 | | JS15 | JS14 | Max | 0/-0,1 | Max | Max | H7 | +0,5/0 | H13 | | g | |
| 32 | 6,6 | 11 | 18 | 31 | 21 | 10 | 32 | 38 | 51 | 14 | 15 | 10,5 | 10 | 8,5 | 20 | 3 | 178 | KF-19032SC |
| 40 | 6,6 | 11 | 22 | 35 | 24 | 10 | 36 | 41 | 54 | 16 | 18 | 12 | 12 | 8,5 | 20 | 3 | 268 | KF-19040SC |
| 50 | 9 | 15 | 30 | 45 | 33 | 12 | 45 | 50 | 65 | 21 | 20 | 15 | 16 | 10,5 | 20 | 3 | 458 | KF-19050SC |
| 63 | 9 | 15 | 35 | 50 | 37 | 12 | 50 | 52 | 67 | 21 | 23 | 15 | 16 | 10,5 | 20 | 3 | 550 | KF-19063SC |
| 80 | 11 | 18 | 40 | 60 | 47 | 14 | 63 | 66 | 86 | 25 | 27 | 18 | 20 | 11,5 | 20 | 3 | 970 | KF-19080SC |
| 100 | 11 | 18 | 50 | 70 | 55 | 15 | 71 | 76 | 96 | 25 | 30 | 18 | 20 | 12,5 | 20 | 3 | 1326 | KF-19100SC |
| 125 | 13,5 | 20 | 60 | 90 | 70 | 20 | 90 | 94 | 124 | 37 | 40 | 25 | 30 | 17 | 20 | 3 | 3000 | KF-19125SC |

Hinge support



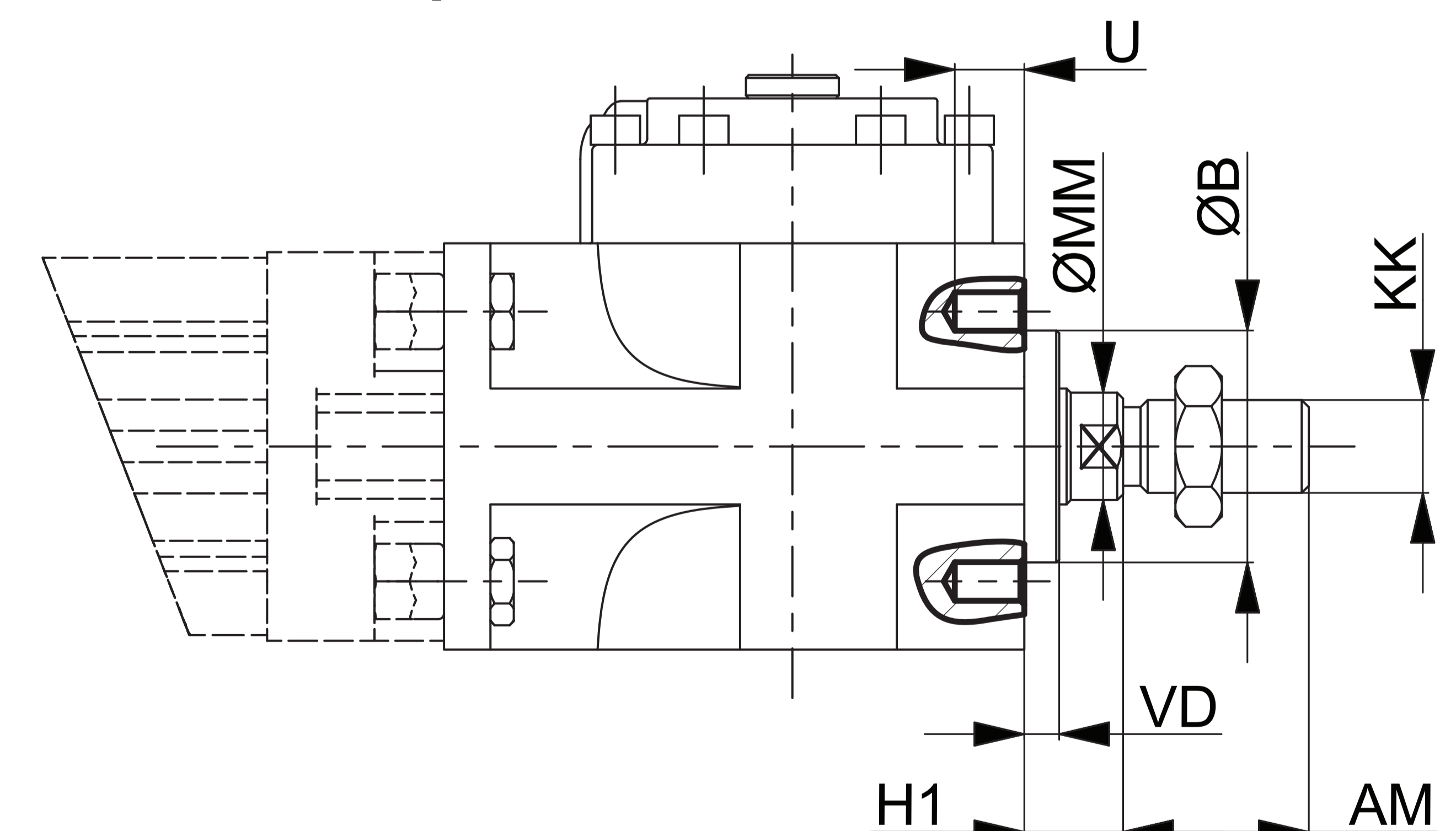
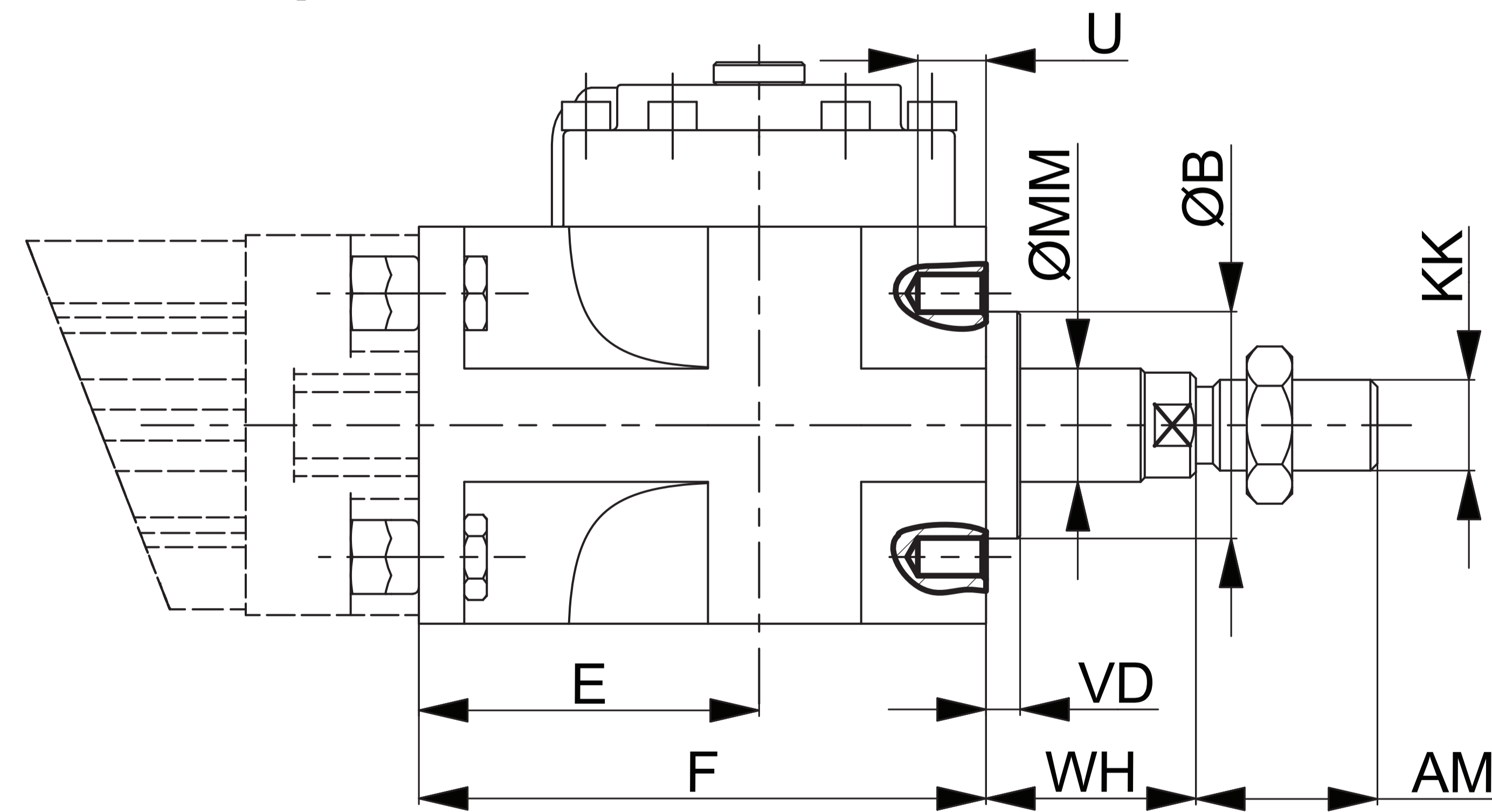
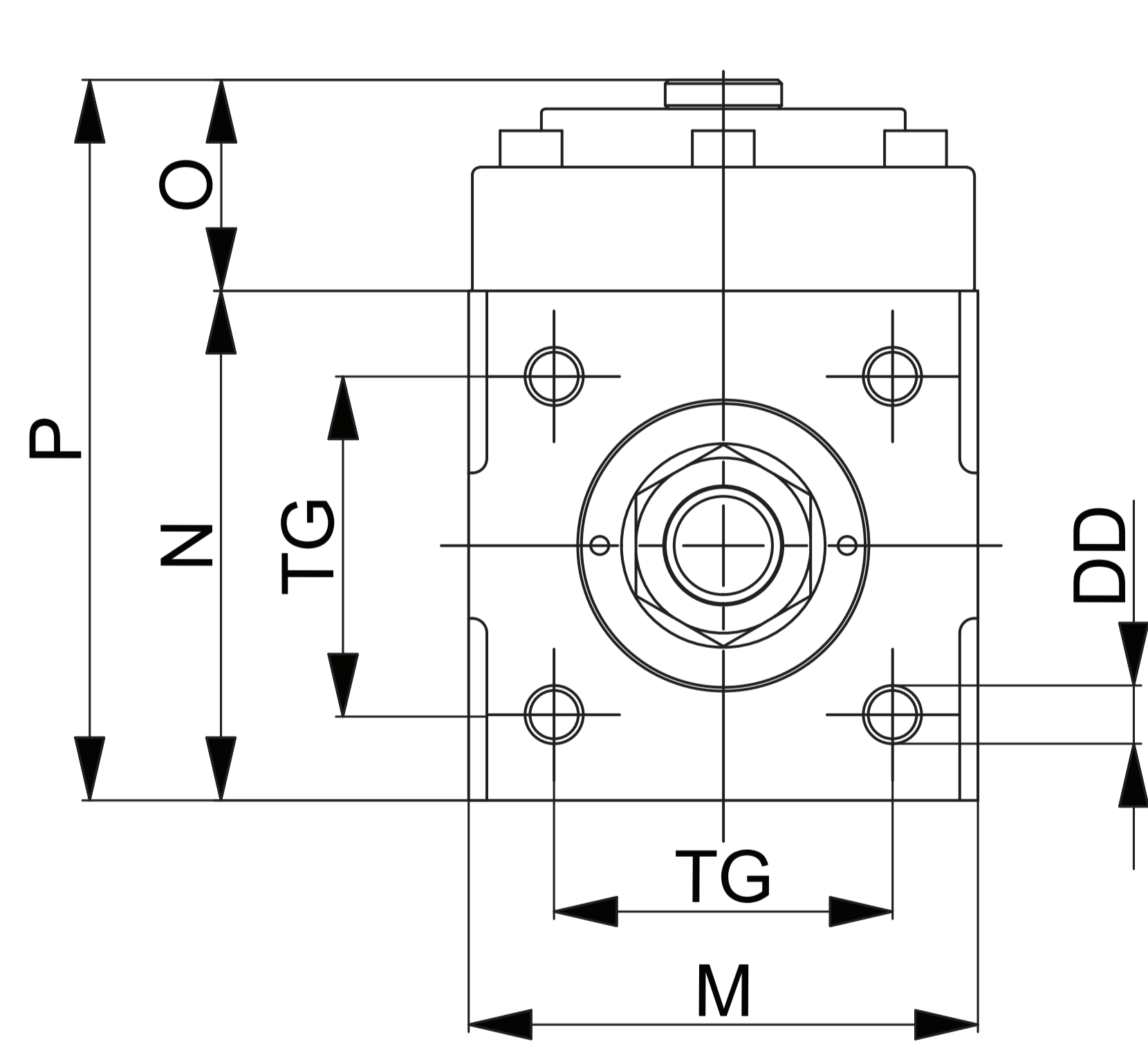
Material: Aluminium body and brass bushing

| Ø | C | ØCR | FK | FN | ØHB | NH | TH | UL | ØU | E | f | C1 | C2 | Mass | Part no. |
|-----|------|-----|------|----|-----|------|------|----|----|------|-----|-----|-----|------|-------------|
| | H9 | f7 | ±0,1 | | | | ±0,1 | | | ±0,5 | | | | g | |
| 32 | 10,5 | 12 | 15 | 30 | 6,6 | 18 | 32 | 46 | 11 | 7 | 1 | 71 | 86 | 100 | KF-41032 |
| 40 | 12 | 16 | 18 | 36 | 9 | 21 | 36 | 55 | 15 | 9 | 1,6 | 87 | 105 | 150 | KF-41040050 |
| 50 | 12 | 16 | 18 | 36 | 9 | 21 | 36 | 55 | 15 | 9 | 1,6 | 99 | 117 | 150 | KF-41040050 |
| 63 | 13 | 20 | 20 | 40 | 11 | 23 | 42 | 65 | 18 | 11 | 1,6 | 116 | 136 | 234 | KF-41063080 |
| 80 | 13 | 20 | 20 | 40 | 11 | 23 | 42 | 65 | 18 | 11 | 1,6 | 136 | 156 | 234 | KF-41063080 |
| 100 | 16 | 25 | 25 | 50 | 14 | 28,5 | 50 | 75 | 20 | 13 | 2 | 164 | 189 | 435 | KF-41100125 |
| 125 | 16 | 25 | 25 | 50 | 14 | 28,5 | 50 | 75 | 20 | 13 | 2 | 192 | 217 | 435 | KF-41100125 |

Locking unit for ISO cylinders Ø 32 ÷ 125

> ISO protrusion

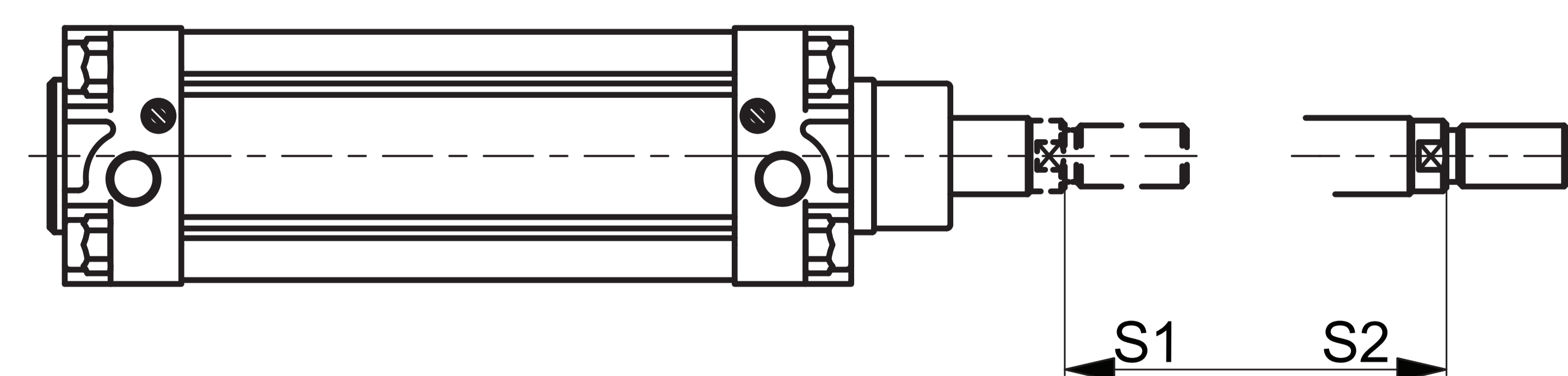
> Reduced protrusion



> Additional length to standard rod

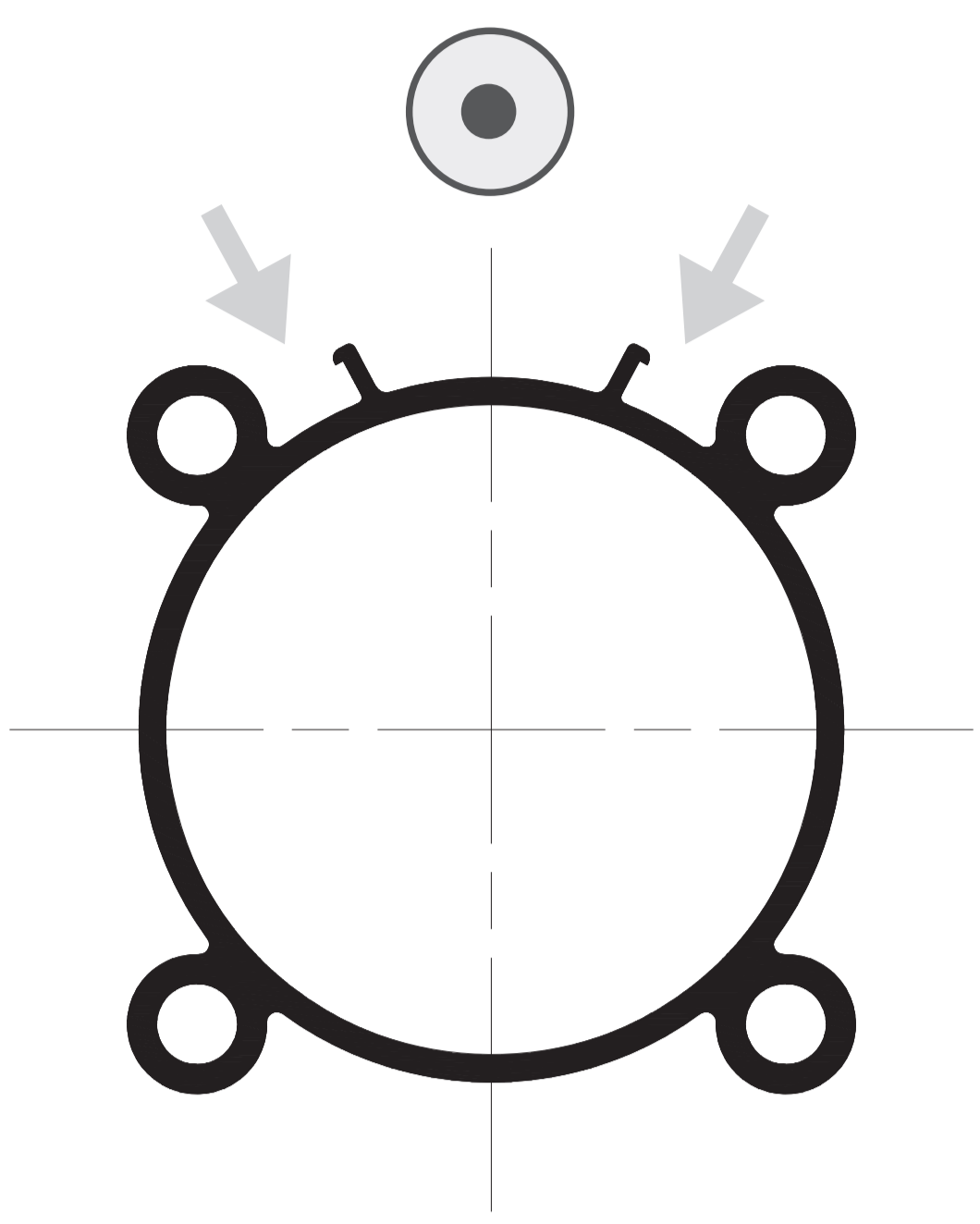
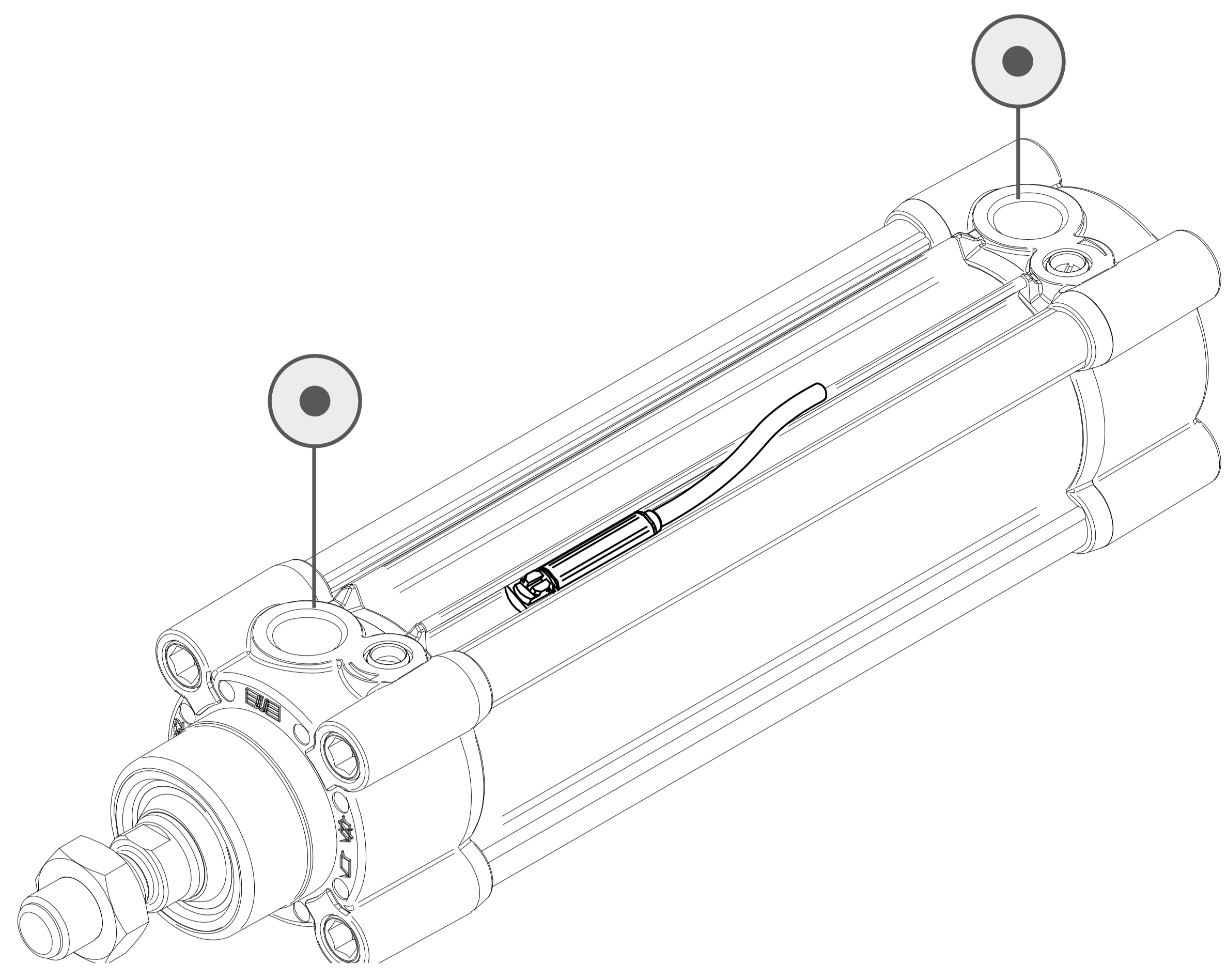
S₁ for ISO protrusion

S₂ for reduced protrusion

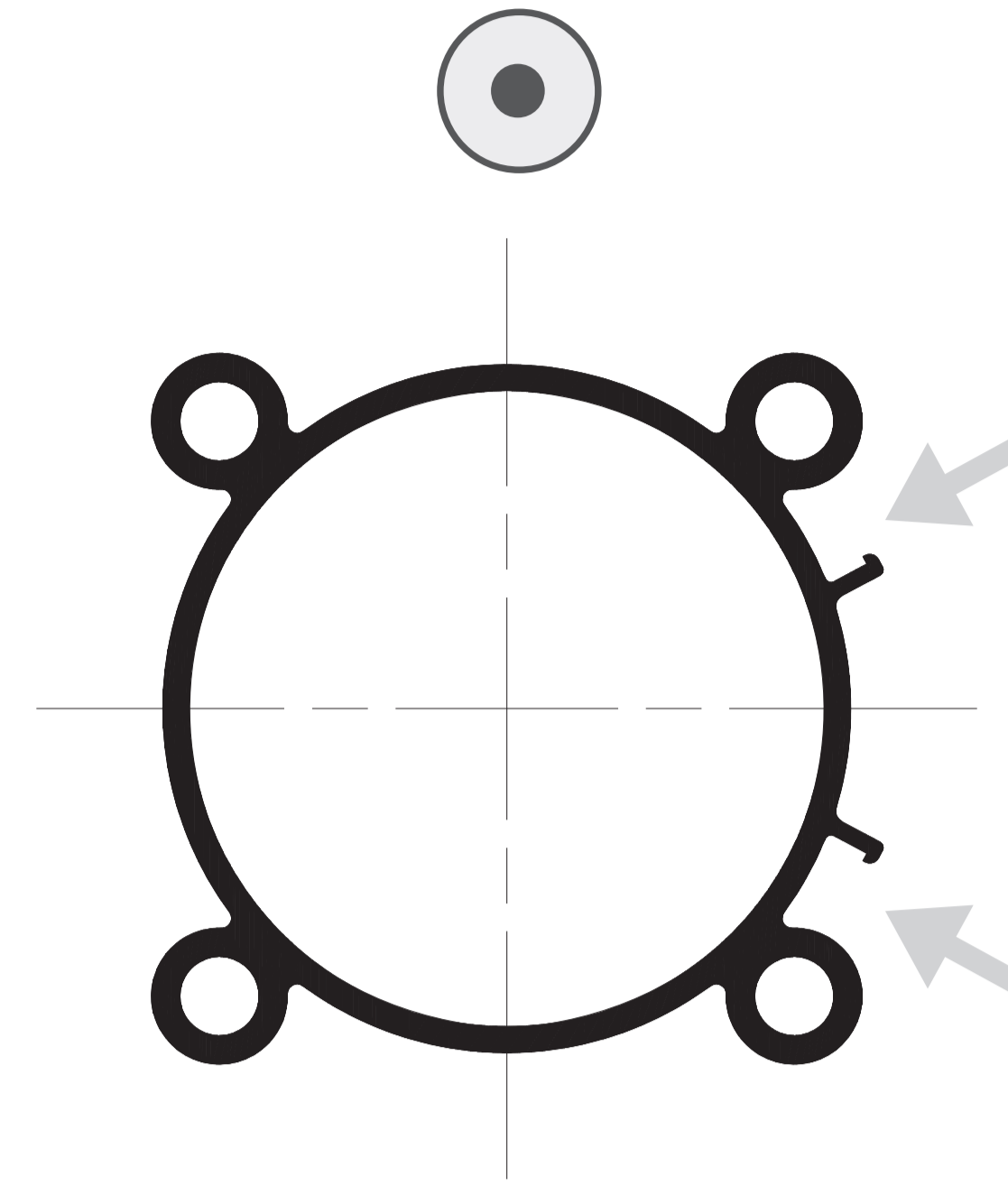


| Ø | AM | B | DD | E | F | H1 | KK | M | MM | N | O | P | S1 | S2 | TG | U | VD | WH |
|-----|----|----|-----|-------|-----|----|------------|-----|----|-----|------|-------|-----|-----|------|----|-----|----|
| 32 | 22 | 30 | M6 | 54,5 | 84 | 16 | M10 x 1,25 | 50 | 12 | 50 | 29,5 | 79,5 | 85 | 75 | 32,5 | 10 | 6 | 26 |
| 40 | 24 | 35 | M6 | 58 | 90 | 15 | M12 x 1,25 | 58 | 16 | 58 | 29,5 | 87,5 | 90 | 75 | 38 | 9 | 6 | 30 |
| 50 | 32 | 40 | M8 | 60 | 100 | 17 | M16 x 1,5 | 70 | 20 | 70 | 29 | 99 | 100 | 80 | 46,5 | 10 | 6 | 37 |
| 63 | 32 | 45 | M8 | 65 | 110 | 17 | M16 x 1,5 | 85 | 20 | 85 | 37 | 122 | 110 | 90 | 56,5 | 13 | 6 | 37 |
| 80 | 40 | 45 | M10 | 75 | 125 | 21 | M20 x 1,5 | 100 | 25 | 100 | 40,5 | 140,5 | 125 | 100 | 72 | 16 | 8 | 46 |
| 100 | 40 | 55 | M10 | 90 | 152 | 26 | M20 x 1,5 | 116 | 25 | 116 | 59 | 179 | 150 | 125 | 89 | 18 | 8 | 51 |
| 125 | 54 | 60 | M12 | 112,5 | 185 | 35 | M27 x 2 | 145 | 32 | 145 | 62 | 207 | 185 | 155 | 110 | 22 | 9,5 | 65 |

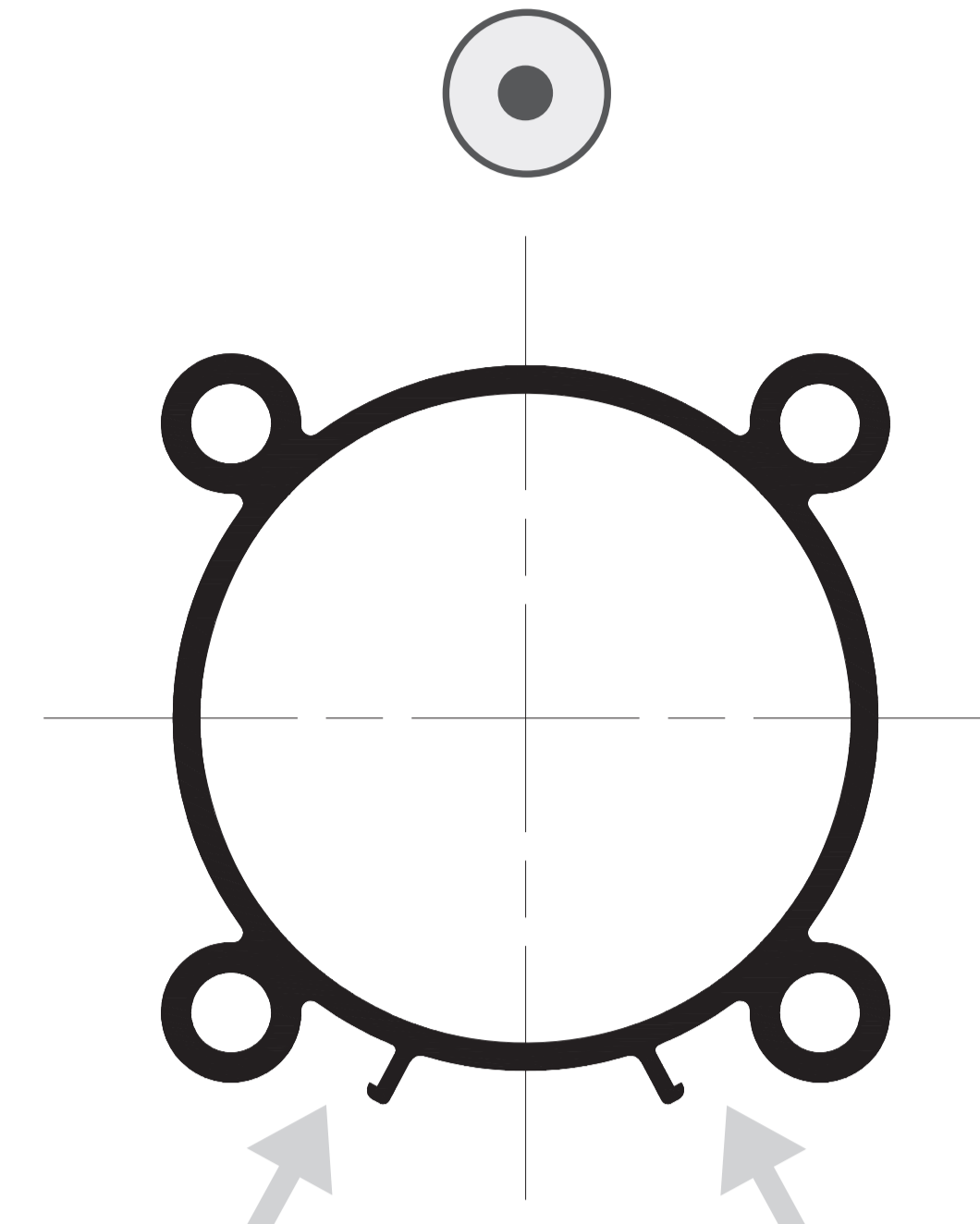
Slot positions for DF magnetic sensor



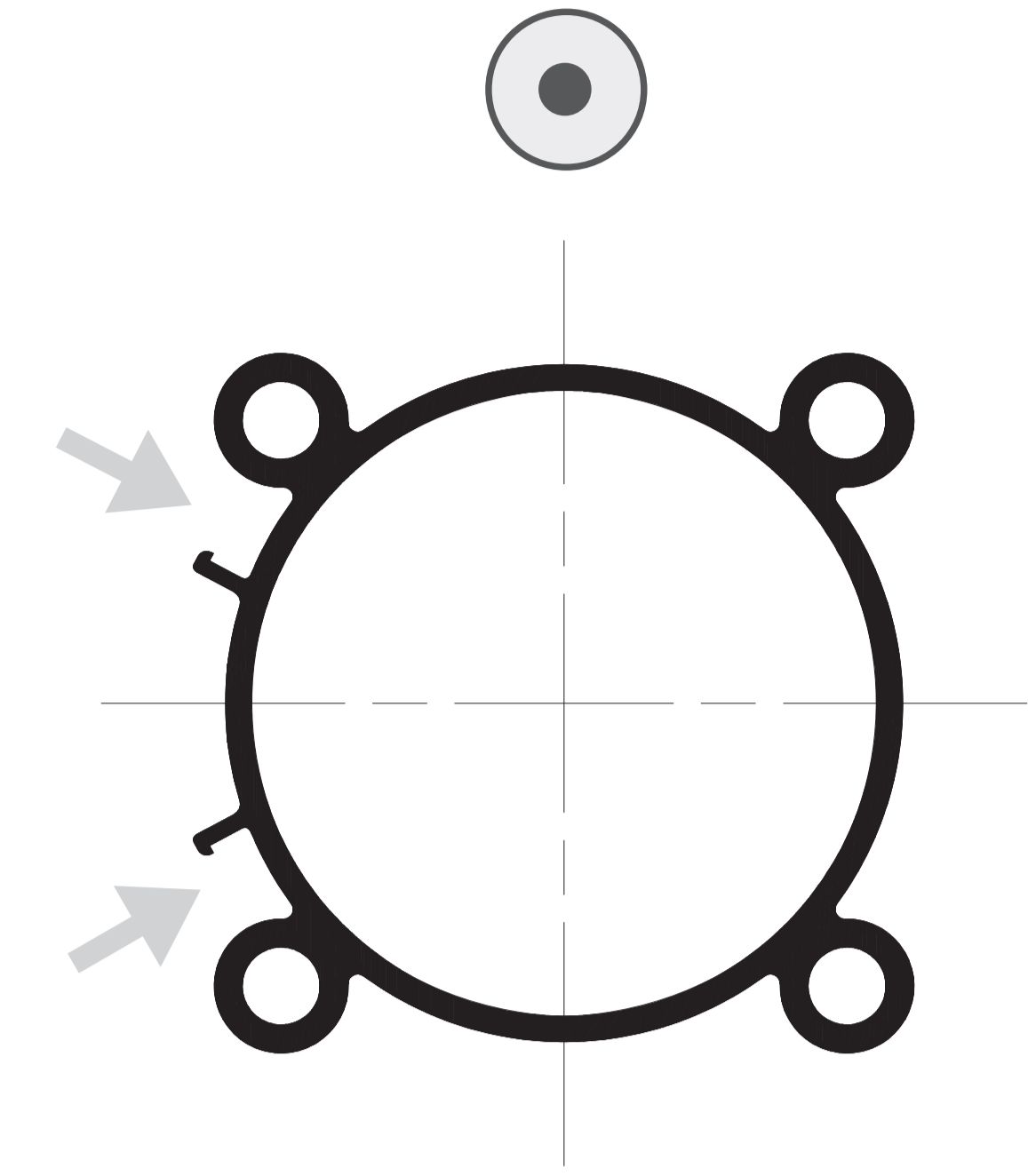
Supply port side
standard



To the right of
supply port side
upon request



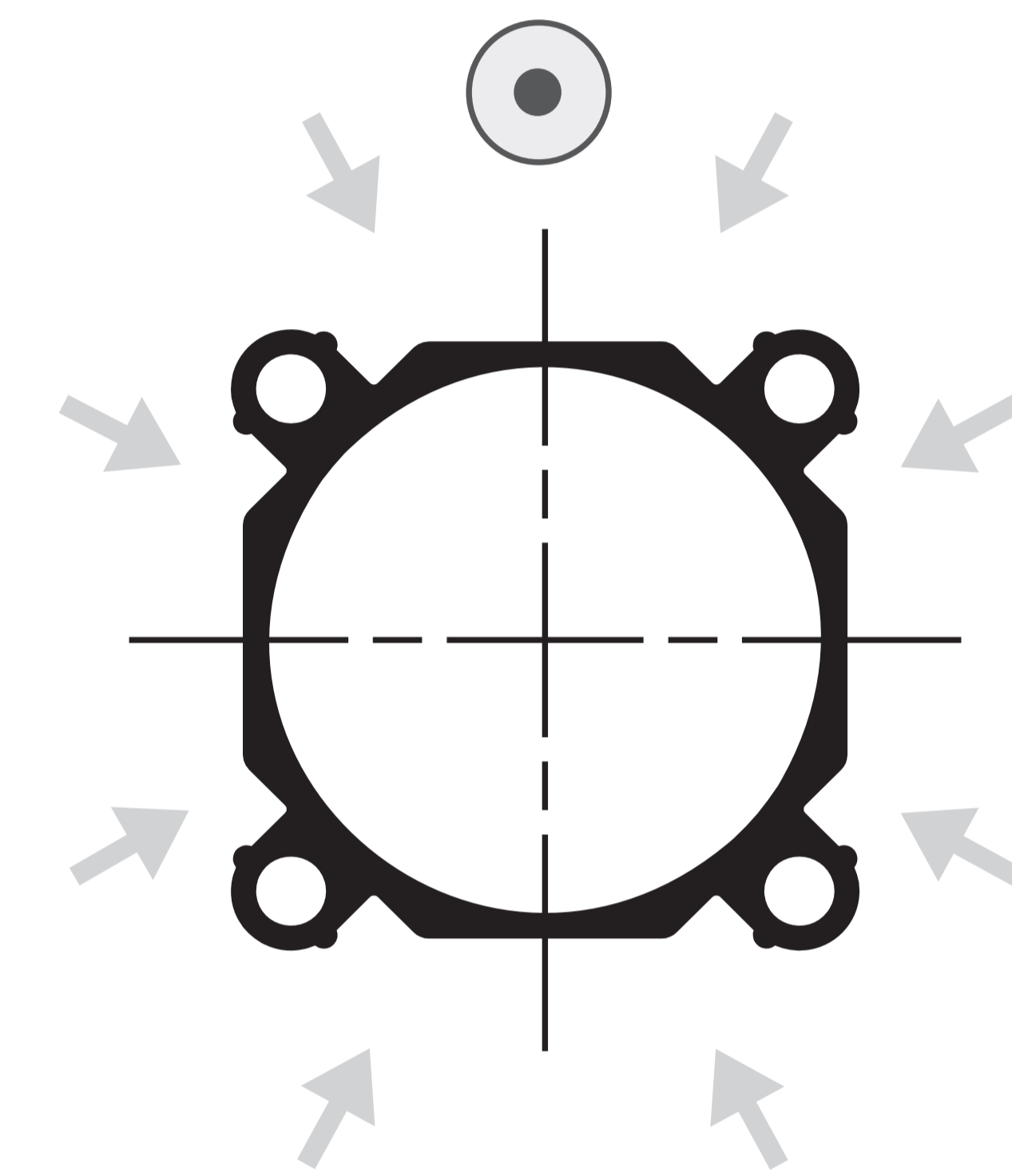
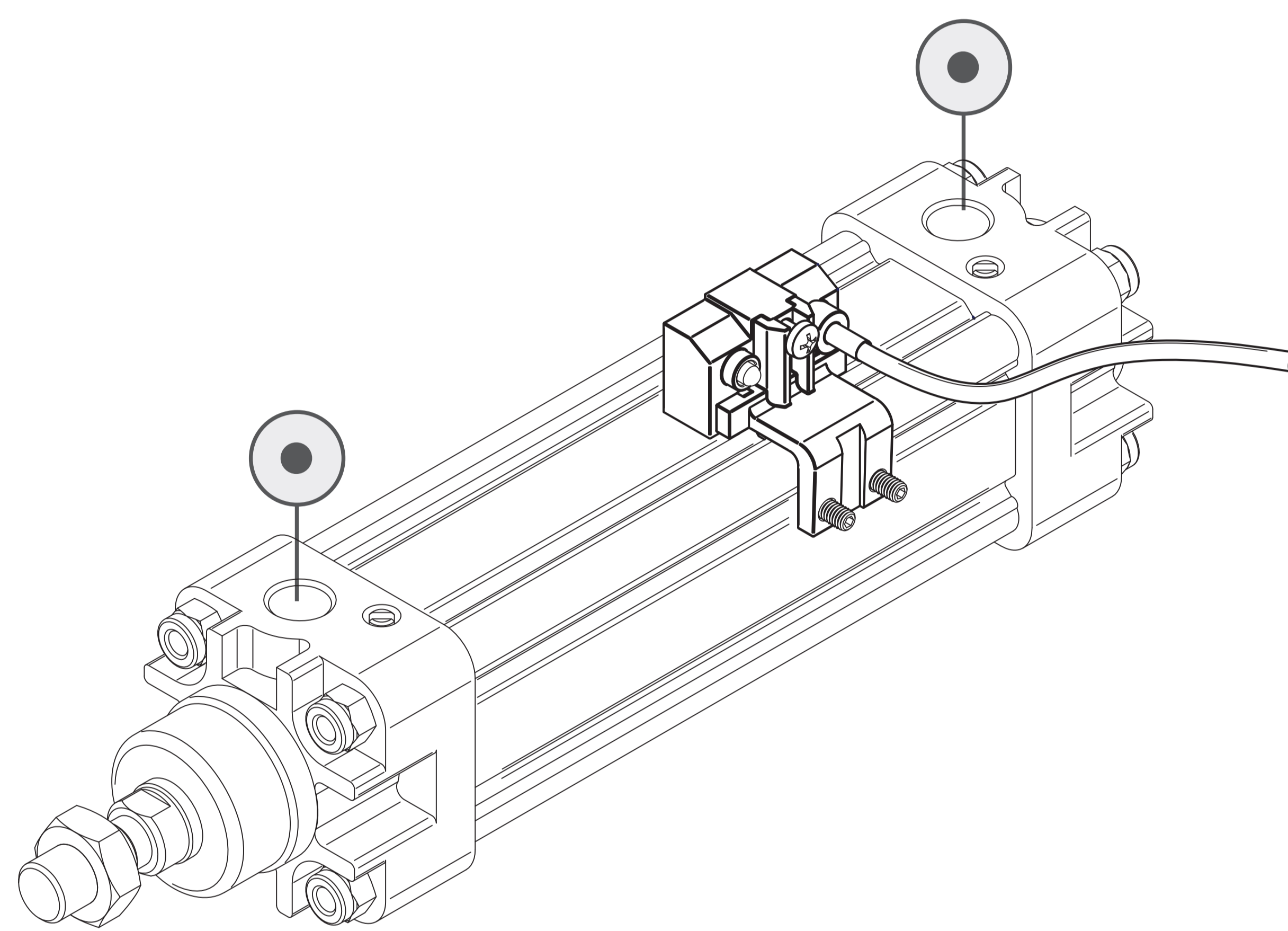
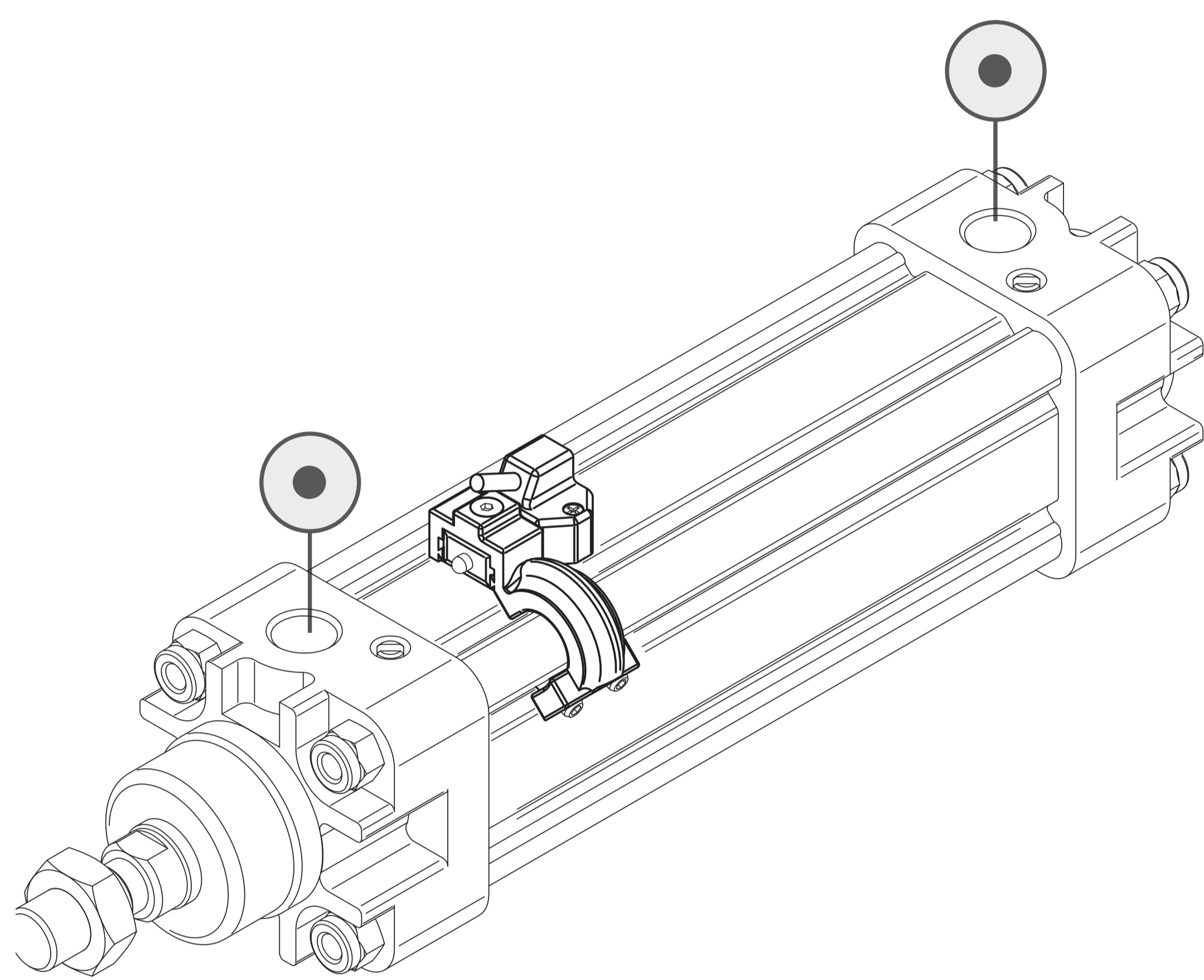
Opposite to the
supply port side
upon request



To the left of
supply port side
upon request

 supply port

Slot positions for DH magnetic sensor - K cylinder series



standard
on all sides