



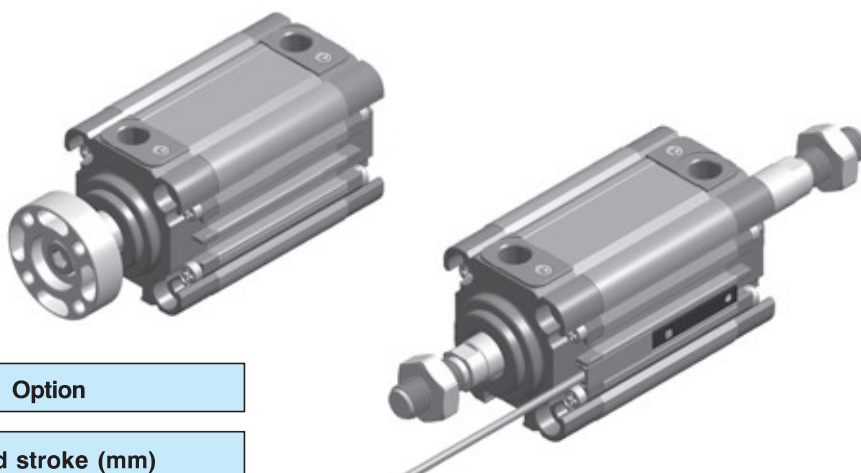
A new series of compact cylinders for long strokes and heavy-duty applications standard supplied with oversized guides and rods, **the first one with adjustable pneumatic cushioning without variations in size.** The inter-axes, centering diameters and rods are in accordance with ISO 6431 and VDMA 24562 specifications.

TECHNICAL CHARACTERISTICS

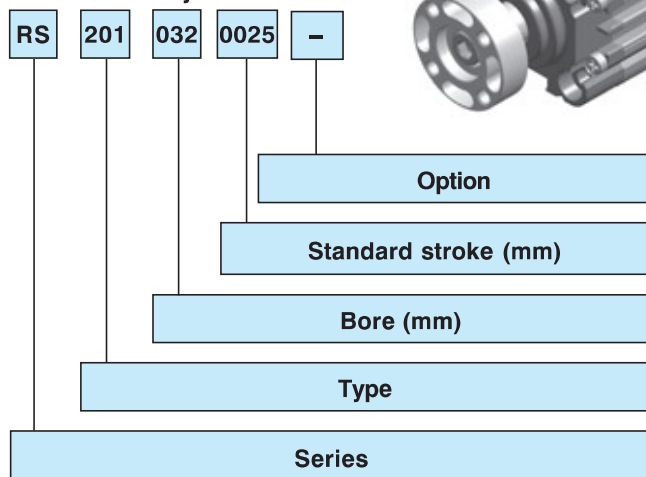
Working pressure: 1,5 ÷ 10 bar
 Ambient temperature: -20°C ÷ 80°C
 Fluid: filtered air, lubricated or not
 Barrel profile of extruded aluminium alloy with chromium-plated piston rod.
 Oversized guides.
 Adjustable cushioning (10 mm ~).
 The version with non-rotating piston rod (RQ-...series) is standard supplied with assembled flange on the female rod.
 Max. operating speed: 1 m/s.
 Magnetic version.

Upon request

- Magnetic sensor DF-... (Section accessories page 2)
- Wire protection strap for magnetic sensor part no.DHF-002100.
- Flange for RS series types 200-201-260-270.
- Hollow piston rod only for through piston rod version.
- Suitable for locking unit **only** with chromium-plated rod. (section High-Tech page 4)
- Cylinder STRONG series with integrated safety locking unit (section High-Tech page 61)
- Slide units **only** for cylinder with extended piston. (section High-Tech page 51)



Codification Key



RQ series

- 1... with piston rod in stainless steel
- 2... with piston rod in chromium-plated steel
- 00 D.A.
- 01 D.A. through piston rod
- 20 D.A. long piston

SERIES

Compact cylinders STRONG Ø 032 ÷ 063 mm, magnetic version, with cushioning and oversized guides standard supplied:

Round barrel:

RS series - compact STRONG

Octagonal barrel

RQ series - compact STRONG non-rotating piston rod with flange.

TYPE

RS series

- 1... with stainless steel piston rod
- 2... with chromium-plated steel piston rod
- 00 D.A.
- 01 D.A. through piston rod
- 10 D.A. non-rotating piston rod
- 11 D.A. non-rotating through piston rod
- 20 D.A. long piston
- 60 S.A. retracted piston rod
- 70 S.A. extended piston rod
- 3... with male piston rod in stainless steel
- 4... with male piston rod in chromium-plated steel
- 00 D.A.
- 01 D.A. through piston rod
- 20 D.A. long piston
- 60 S.A. retracted piston rod
- 70 S.A. extended piston rod

BORE

032 - 040 - 050 - 063 mm

STANDARD STROKE

Single acting

0005-0010-0015-0020-0025 mm

Double acting

0005-0010-0015-0020-0025-0030-0040-0050-0060-0080 mm

Max stroke with guided piston rod (upon request):

Ø 32-40 **0400 mm**
 Ø 50 **0500 mm**
 Ø 63 **0800 mm**

Version with extended piston (upon request):

Ø 32-40 **0800 mm**
 Ø 50-63 **1000 mm**

OPTION

- C** = with flange for RS series versions 100/101/160/170 and 200/201/260/270
- H** = hollow piston rod only for versions with through piston rod
- G** = prearranged for locking unit with the exception of single-acting cylinders and only with piston rod in chromium-plated steel.

Construction details

- Barrel in extruded aluminium alloy, externally and internally anodized 15 µm, plain profile, flush-mounted sensors.
- Die-cast end-caps in aluminium alloy.
- Self-tapping screws in zinc-plated steel.
- Chromium-plated steel rod; stainless steel upon request.
- Aluminium piston.
- Acetal resin slide.
- Oversized bearings.
- Piston seals in nitrile rubber.
- Polyurethane rod seals.
- Adjustable pneumatic cushioning for efficient deceleration of the piston and reduced sound pollution.

- D.A. piston in aluminium

- D.A. extended piston for supporting higher radial load



- Locking unit L1-N... series with chromium-plated piston rod except for versions with non-rotating device (RS-210...-RS-211...).

Nominal tolerance on stroke

| Cyl. Ø | Tolerance mm |
|---------|--------------|
| 32 ÷ 50 | + 2/0 |
| 63 | + 2,5/0 |

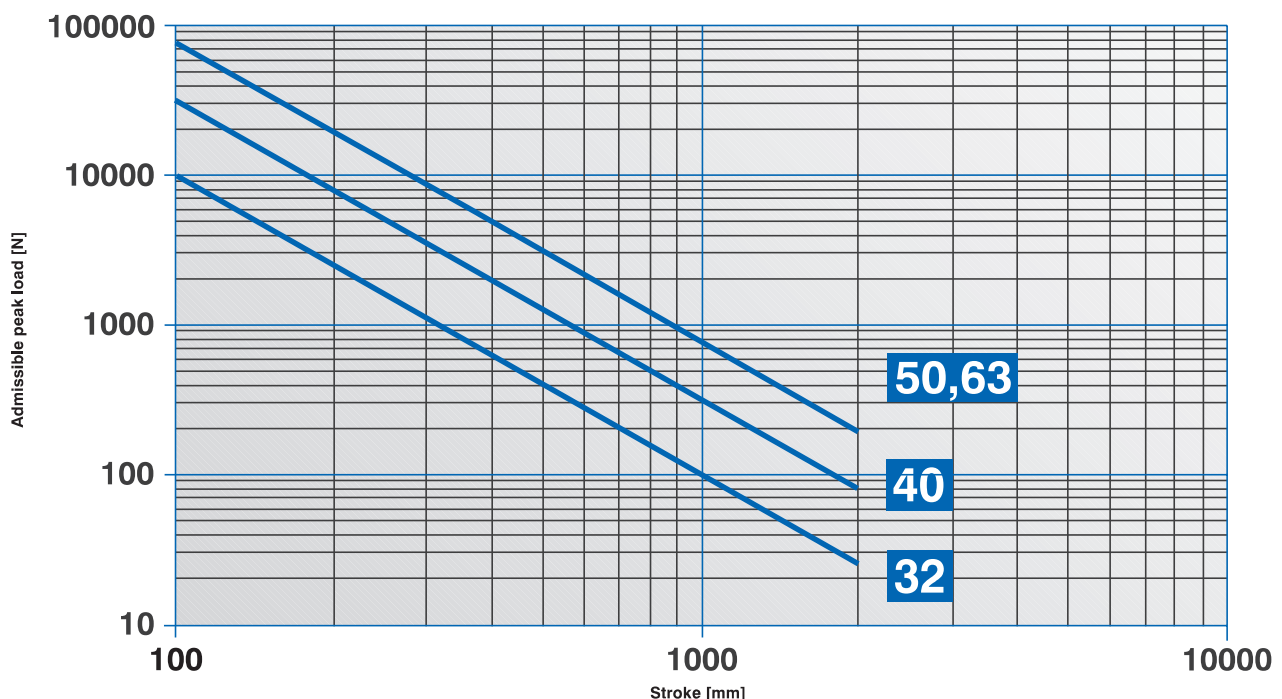
Theoretical forces [N] developed at the working pressure [bar]

| Cyl. Ø | Working area [mm ²] | Working pressure [bar] | | | | | |
|--------|---------------------------------|------------------------|-----|------|------|------|------|
| | | 2 | 4 | 6 | 8 | 10 | |
| 32 | Thrust | 804 | 161 | 322 | 482 | 643 | 804 |
| | traction | 691 | 138 | 276 | 414 | 553 | 691 |
| 40 | Thrust | 1256 | 251 | 502 | 754 | 1005 | 1256 |
| | traction | 1056 | 211 | 422 | 633 | 844 | 1055 |
| 50 | Thrust | 1962 | 393 | 785 | 1178 | 1570 | 1963 |
| | traction | 1649 | 330 | 660 | 990 | 1320 | 1650 |
| 63 | Thrust | 3116 | 623 | 1246 | 1869 | 2493 | 3116 |
| | traction | 2802 | 560 | 1120 | 1680 | 2240 | 2800 |

Maximum applicable torque [Nm] for RQ series non-rotating rod

| Cyl. Ø | Torque [Nm] |
|--------|-------------|
| 32 | 2 |
| 40 | 3 |
| 50 | 5 |
| 63 | 8 |

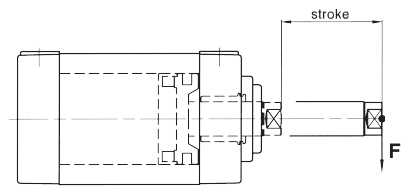
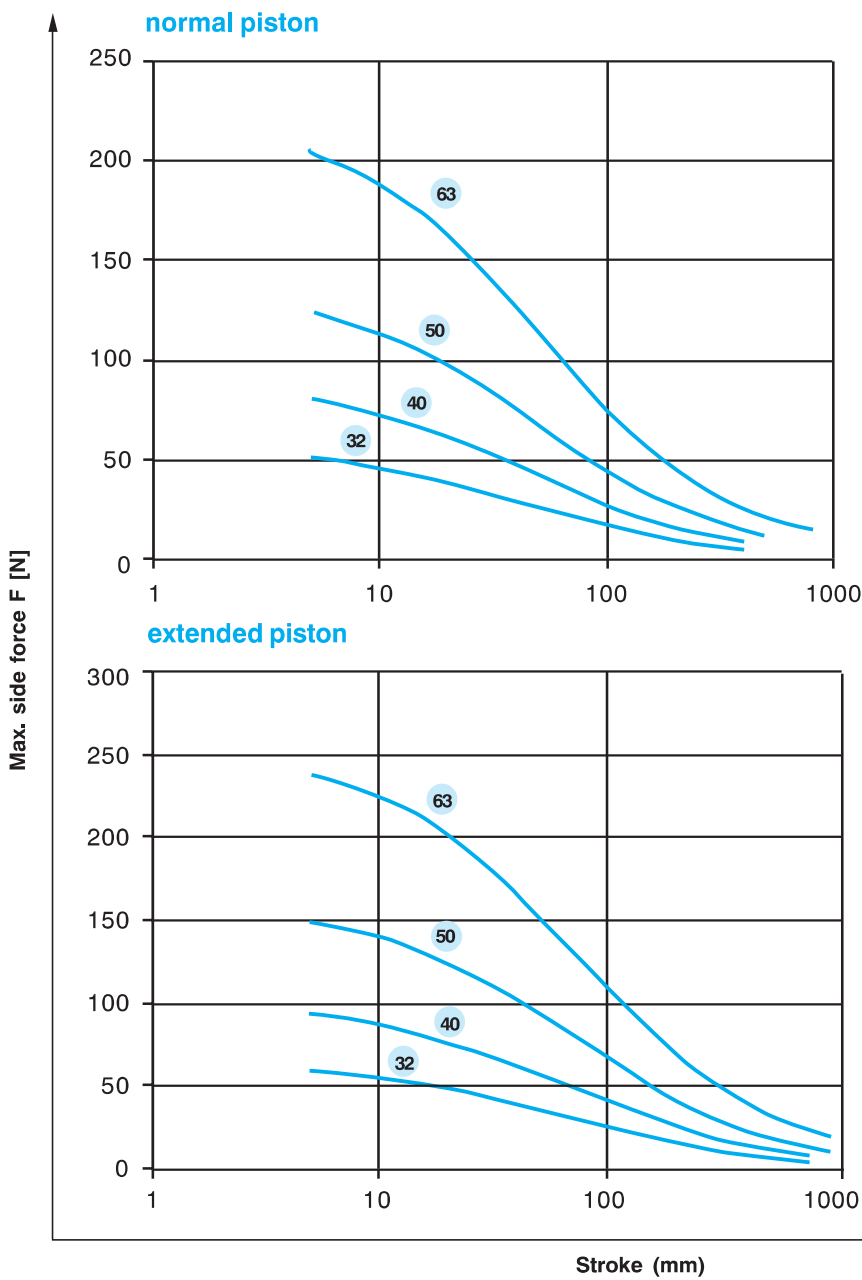
In the case of pneumatic cylinders with a through rod, the theoretical force to be considered, in both directions, is always equal to the "traction" value indicated in the table. For practical purposes these values should be reduced taking into account the weight and sliding friction of the mobile equipment (~ -10%).



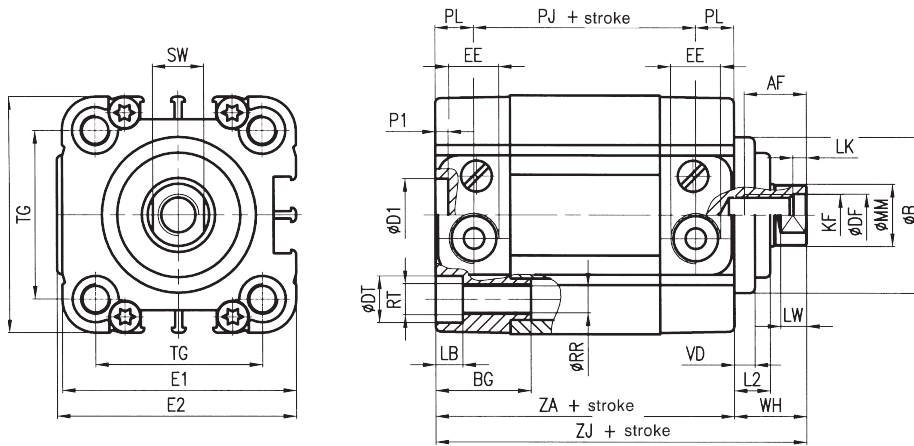
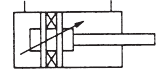
Theoretical forces of spring traction for cylinder types ___260___/___270___

| Cyl. Ø | Max. force (N) | Min. force (N) | Max. stroke (mm) | Decrease per mm stroke (N/mm) |
|--------|----------------|----------------|------------------|-------------------------------|
| 32 | 40 | 24 | 25 | 0,64 |
| 40 | 50 | 35 | 25 | 0,6 |
| 50 | 90 | 49 | 25 | 1,64 |
| 63 | 90 | 49 | 25 | 1,64 |

Graph side load on piston rod



Double-acting cylinder RS 200... / RS 220...* series extended piston



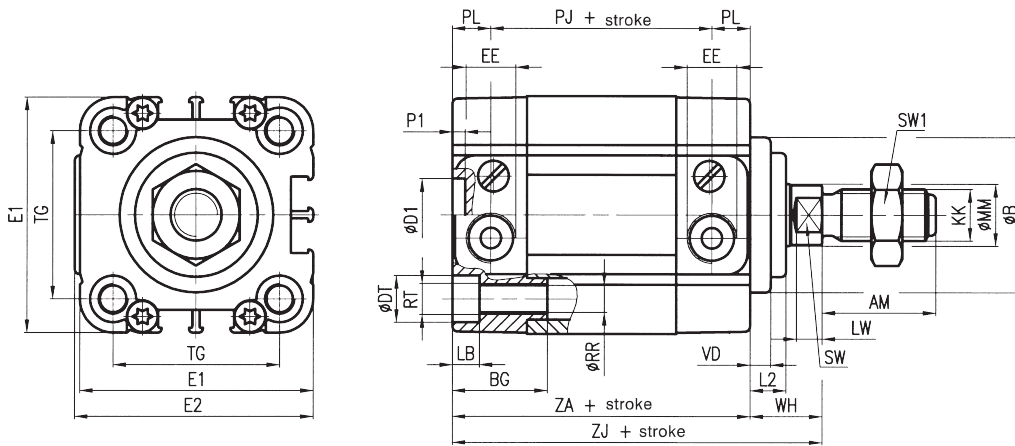
Mass RS 200...

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 215 | 2,65 | 70 | 0,9 |
| 40 | 347 | 4 | 110 | 1,6 |
| 50 | 520 | 5,6 | 180 | 2,5 |
| 63 | 800 | 6,55 | 260 | 2,5 |

Mass RS 220...

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 301,5 | 2,65 | 121,5 | 0,9 |
| 40 | 482 | 4 | 197 | 1,6 |
| 50 | 769 | 5,6 | 327 | 2,5 |
| 63 | 1151,5 | 6,55 | 485 | 2,5 |

Double-acting cylinder with male rod RS 400... / RS 420...* series extended piston



Mass RS 400...

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 245 | 2,65 | 100 | 0,9 |
| 40 | 392 | 4 | 155 | 1,6 |
| 50 | 600 | 5,6 | 260 | 2,5 |
| 63 | 880 | 6,55 | 340 | 2,5 |

Mass RS 420...

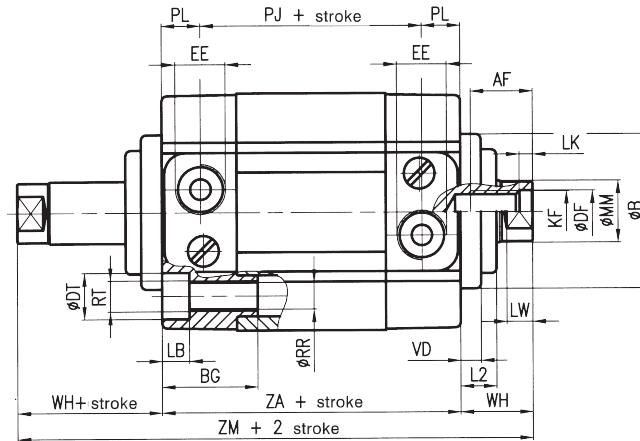
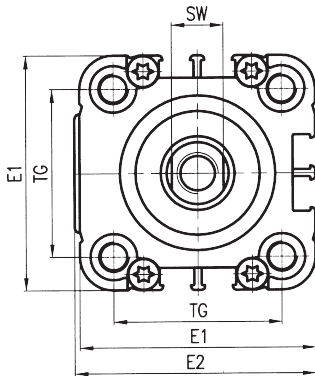
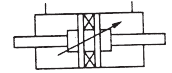
| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 331,5 | 2,65 | 151,5 | 0,9 |
| 40 | 527 | 4 | 242 | 1,6 |
| 50 | 849 | 5,6 | 407 | 2,5 |
| 63 | 1231,5 | 6,55 | 565 | 2,5 |

| Cyl. Ø | AF | AM | B | BG | H11 | DF | DT | E1 | E2 | EE | KF | KK | L2 | LB | LK | LW | MM | P1 | PJ | PL | RR | RT | SW | SW1 | TG | VD | WH | ZA | ZJ |
|--------|----|----|----|----|-----|------|----|----|----|------|-----|----------|----|-----|----|----|----|----|----|-----|-----|----|----|-----|------|----|----|----|----|
| 32 | 12 | 22 | 30 | 18 | 14 | 8,2 | 9 | 46 | 47 | G1/8 | M8 | M10x1,25 | 7 | 5,3 | 2 | 5 | 12 | 25 | 29 | 7,5 | 5,2 | M6 | 10 | 17 | 32,5 | 4 | 14 | 44 | 58 |
| 40 | 16 | 24 | 35 | 18 | 14 | 10,2 | 9 | 56 | 57 | G1/8 | M10 | M12x1,25 | 7 | 5,3 | 2 | 5 | 16 | 25 | 30 | 7,5 | 5,2 | M6 | 13 | 19 | 38 | 4 | 14 | 45 | 59 |
| 50 | 20 | 32 | 40 | 24 | 18 | 12,2 | 11 | 66 | 67 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 25 | 30 | 7,5 | 6,5 | M8 | 17 | 24 | 46,5 | 5 | 18 | 45 | 63 |
| 63 | 20 | 32 | 45 | 24 | 18 | 12,2 | 11 | 79 | 80 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 25 | 34 | 7,5 | 6,5 | M8 | 17 | 24 | 56,5 | 5 | 18 | 49 | 67 |

* For cylinder types with extended piston, dimensions PJ, ZA and ZJ will be increased by 20 mm (Ø 32-40 mm) and 25 mm (Ø 50-63 mm).



Double-acting cylinder, through piston rod RS 201 ... series



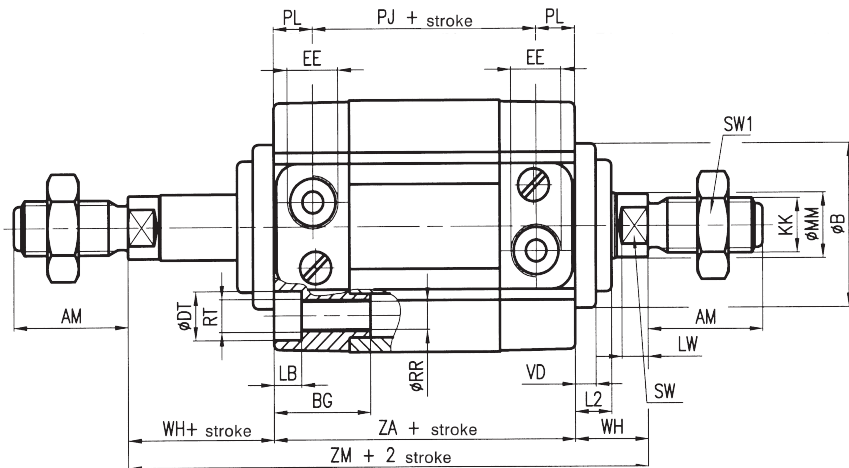
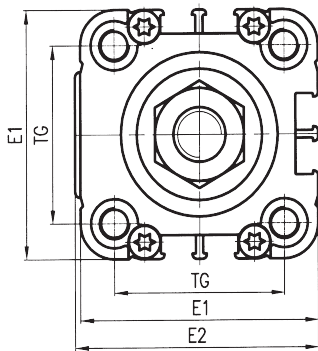
For version with hollow through piston rod, option H in codification key:

| Cyl. Ø | Hole mm |
|--------|---------|
| 32-40 | 4,5 |
| 50-63 | 6 |

Mass

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 245 | 3,55 | 96 | 1,8 |
| 40 | 392 | 5,6 | 151 | 3,2 |
| 50 | 596 | 8,1 | 250 | 5 |
| 63 | 875 | 9,05 | 330 | 5 |

Double-acting cylinder, through male piston rod RS 401 ... series

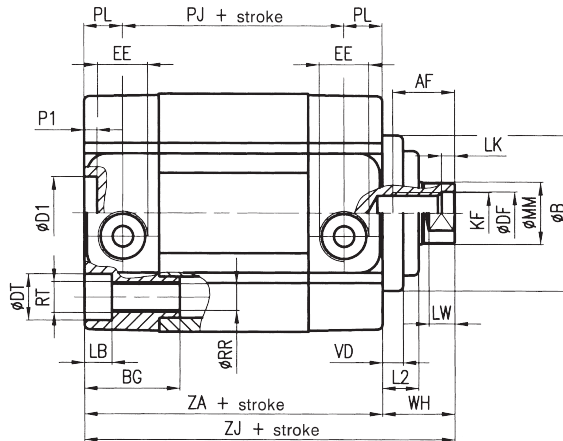
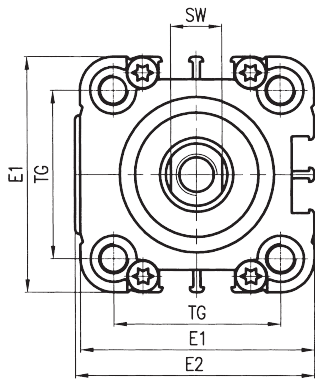
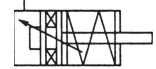


Mass

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 305 | 3,55 | 156 | 1,8 |
| 40 | 482 | 5,6 | 241 | 3,2 |
| 50 | 756 | 8,1 | 410 | 5 |
| 63 | 1035 | 9,05 | 490 | 5 |

| Cyl. Ø | AF | AM | Ø B | BG | Ø DF | Ø DT | E1 | E2 | EE | KF | KK | L2 | LB | LK | LW | Ø MM | PJ | PL | Ø RR | RT | SW | SW1 | TG | VD | WH | ZA | ZM |
|--------|----|----|-----|----|------|------|----|----|------|-----|----------|----|-----|----|----|------|----|-----|------|----|----|-----|------|----|----|----|----|
| 32 | 12 | 22 | 30 | 18 | 8,2 | 9 | 46 | 47 | G1/8 | M8 | M10x1,25 | 7 | 5,3 | 2 | 5 | 12 | 29 | 7,5 | 5,2 | M6 | 10 | 17 | 32,5 | 4 | 14 | 44 | 72 |
| 40 | 16 | 24 | 35 | 18 | 10,2 | 9 | 56 | 57 | G1/8 | M10 | M12x1,25 | 7 | 5,3 | 2 | 5 | 16 | 30 | 7,5 | 5,2 | M6 | 13 | 19 | 38 | 4 | 14 | 45 | 73 |
| 50 | 20 | 32 | 40 | 24 | 12,2 | 11 | 66 | 67 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 30 | 7,5 | 6,5 | M8 | 17 | 24 | 46,5 | 5 | 18 | 45 | 81 |
| 63 | 20 | 32 | 45 | 24 | 12,2 | 11 | 79 | 80 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 35 | 7,5 | 6,5 | M8 | 17 | 24 | 56,5 | 5 | 18 | 50 | 86 |

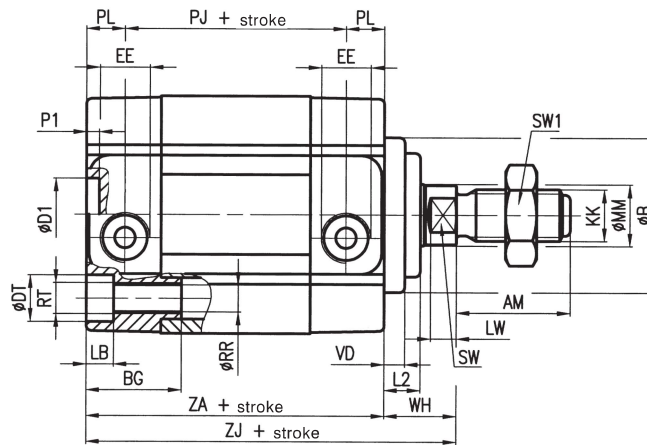
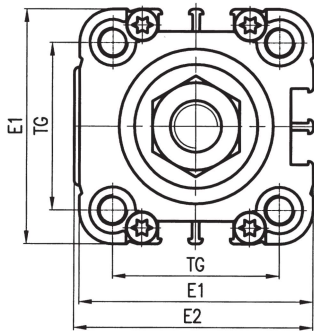
Single-acting cylinder, retracted piston rod, RS 260 ... series



Mass

| Cyl. ϕ | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|-------------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 217 | 2,65 | 73 | 0,9 |
| 40 | 350 | 4 | 116 | 1,6 |
| 50 | 525 | 5,6 | 192 | 2,5 |
| 63 | 805 | 6,55 | 272 | 2,5 |

Single-acting cylinder retracted male piston rod RS 460 ... series



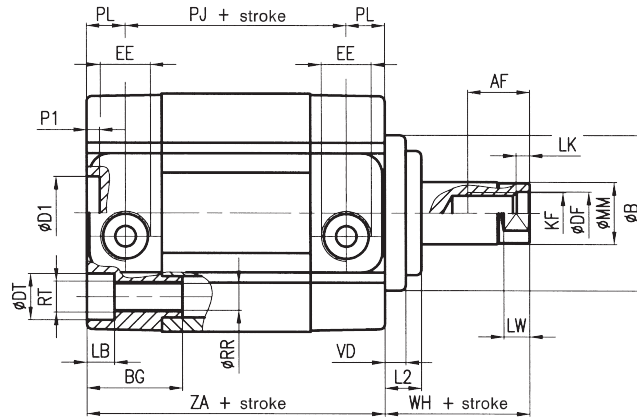
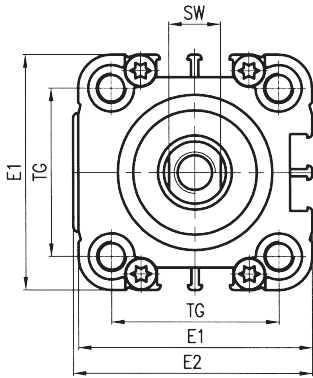
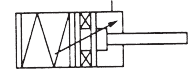
Mass

| Cyl. ϕ | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|-------------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 247 | 2,65 | 103 | 0,9 |
| 40 | 395 | 4 | 161 | 1,6 |
| 50 | 605 | 5,6 | 272 | 2,5 |
| 63 | 885 | 6,55 | 352 | 2,5 |

| Cyl. ϕ | AF | AM | ϕB | BG | $\phi D1$ H11 | ϕDF | ϕDT | E1 | E2 | EE | KF | KK | L2 | LB | LK | LW | ϕMM | P1 | PJ | PL | ϕRR | RT | SW | SW1 | TG | VD | WH | ZA | ZJ |
|-------------|----|----|----------|----|---------------|-----------|-----------|----|----|------|-----|----------|----|-----|----|----|-----------|----|----|-----|-----------|----|----|-----|------|----|----|----|----|
| 32 | 12 | 22 | 30 | 18 | 14 | 8,2 | 9 | 46 | 47 | G1/8 | M8 | M10x1,25 | 7 | 5,3 | 2 | 5 | 12 | 25 | 29 | 7,5 | 5,2 | M6 | 10 | 17 | 32,5 | 4 | 14 | 44 | 58 |
| 40 | 16 | 24 | 35 | 18 | 14 | 10,2 | 9 | 56 | 57 | G1/8 | M10 | M12x1,25 | 7 | 5,3 | 2 | 5 | 16 | 25 | 30 | 7,5 | 5,2 | M6 | 13 | 19 | 38 | 4 | 14 | 45 | 59 |
| 50 | 20 | 32 | 40 | 24 | 18 | 12,2 | 11 | 66 | 67 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 25 | 30 | 7,5 | 6,5 | M8 | 17 | 24 | 46,5 | 5 | 18 | 45 | 63 |
| 63 | 20 | 32 | 45 | 24 | 18 | 12,2 | 11 | 79 | 80 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 25 | 35 | 7,5 | 6,5 | M8 | 17 | 24 | 56,5 | 5 | 18 | 50 | 68 |



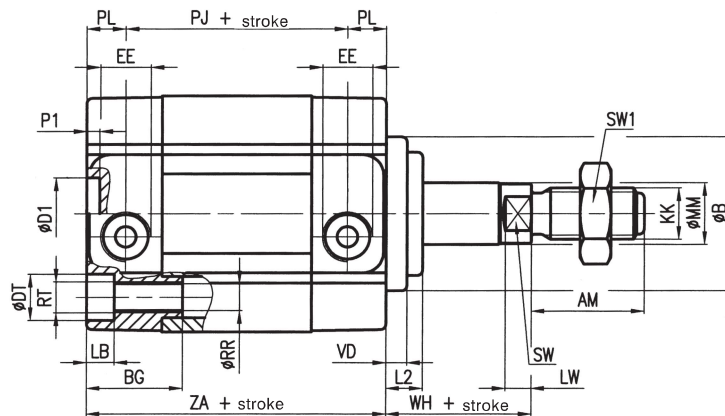
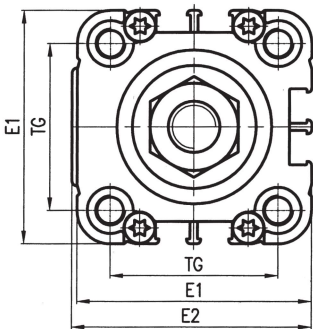
Single-acting cylinder, extended piston rod, RS 270...series



Mass

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 213 | 2,65 | 73 | 0,9 |
| 40 | 344 | 4 | 116 | 1,6 |
| 50 | 515 | 5,6 | 192 | 2,5 |
| 63 | 795 | 6,55 | 272 | 2,5 |

Single-acting cylinder, extended male piston rod, RS 470...series

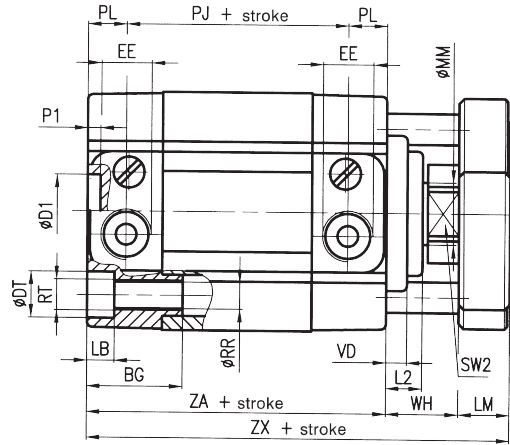
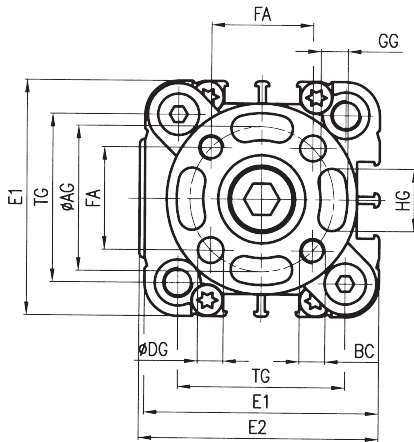
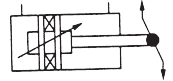


Mass

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 243 | 2,65 | 103 | 0,9 |
| 40 | 398 | 4 | 161 | 1,6 |
| 50 | 595 | 5,6 | 272 | 2,5 |
| 63 | 875 | 6,55 | 352 | 2,5 |

| Cyl. Ø | AF | AM | Ø B | BG | ØD1 H11 | Ø DF | Ø DT | E1 | E2 | EE | KF | KK | L2 | LB | LK | LW | Ø MM | P1 | PJ | PL | Ø RR | RT | SW | SW1 | TG | VD | WH | ZA |
|--------|----|----|-----|----|---------|------|------|----|----|------|-----|----------|----|-----|----|----|------|----|----|-----|------|----|----|-----|------|----|----|----|
| 32 | 12 | 22 | 30 | 18 | 14 | 8,2 | 9 | 46 | 47 | G1/8 | M8 | M10x1,25 | 7 | 5,3 | 2 | 5 | 12 | 25 | 29 | 7,5 | 5,2 | M6 | 10 | 17 | 32,5 | 4 | 14 | 44 |
| 40 | 16 | 24 | 35 | 18 | 14 | 10,2 | 9 | 56 | 57 | G1/8 | M10 | M12x1,25 | 7 | 5,3 | 2 | 5 | 16 | 25 | 30 | 7,5 | 5,2 | M6 | 13 | 19 | 38 | 4 | 14 | 45 |
| 50 | 20 | 32 | 40 | 24 | 18 | 12,2 | 11 | 66 | 67 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 25 | 30 | 7,5 | 6,5 | M8 | 17 | 24 | 46,5 | 5 | 18 | 45 |
| 63 | 20 | 32 | 45 | 24 | 18 | 12,2 | 11 | 79 | 80 | G1/8 | M12 | M16x1,5 | 10 | 6,5 | 2 | 6 | 20 | 25 | 35 | 7,5 | 6,5 | M8 | 17 | 24 | 56,5 | 5 | 18 | 50 |

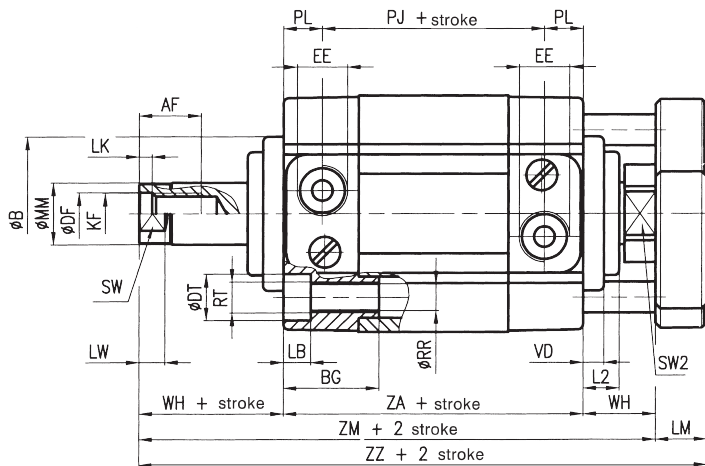
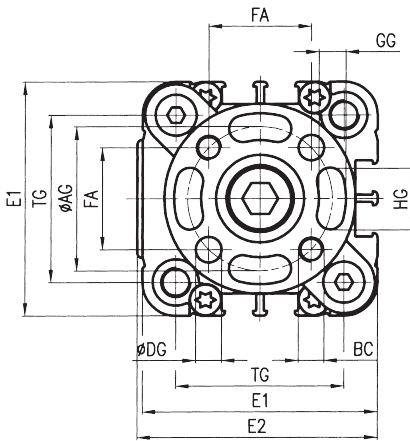
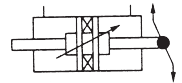
Double-acting cylinder with non-rotating device RS 210 ... series



Mass

| Cyl. ϕ | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|-------------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 255 | 3,09 | 110 | 1,34 |
| 40 | 414 | 4,8 | 177 | 2,4 |
| 50 | 622 | 6,4 | 282 | 3,3 |
| 63 | 952 | 7,79 | 412 | 3,7 |

Double-acting cylinder, through piston rod with non-rotating device RS 211 ... series



Mass

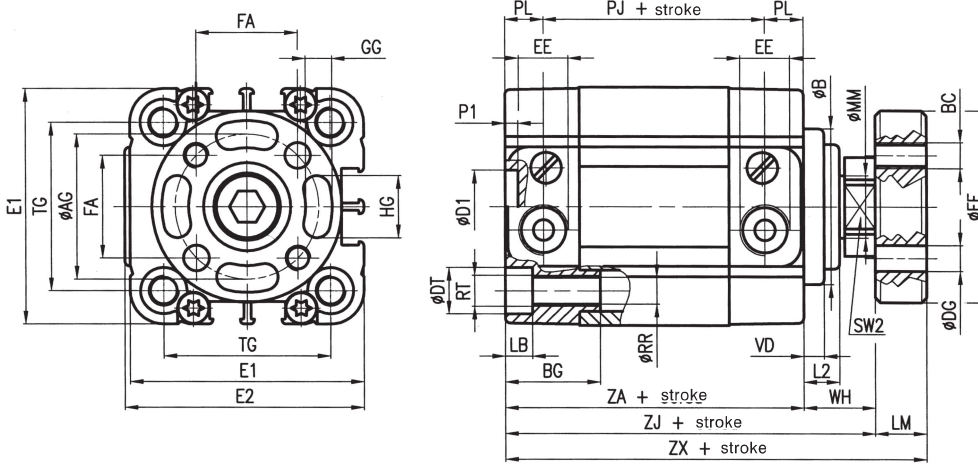
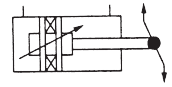
| Cyl. ϕ | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|-------------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 285 | 3,99 | 136 | 2,24 |
| 40 | 459 | 6,4 | 218 | 4 |
| 50 | 698 | 8,9 | 352 | 5,8 |
| 63 | 1025 | 10,29 | 482 | 6,24 |

| Cyl. ϕ | AF | ϕAG | ϕB | BC | BG | $\phi D1$ | ϕDF | ϕDG | ϕDT |
|-------------|----|-----------|----------|----|----|-----------|-----------|-----------|-----------|
| 32 | 12 | 28 | 30 | M5 | 18 | 14 | 8,2 | 5 | 9 |
| 40 | 16 | 33 | 35 | M5 | 18 | 14 | 10,2 | 5 | 9 |
| 50 | 20 | 42 | 40 | M6 | 24 | 18 | 12,2 | 6 | 11 |
| 63 | 20 | 50 | 45 | M6 | 24 | 18 | 12,2 | 6 | 11 |

| Cyl. ϕ | E1 | E2 | EE | FA | GG | HG | KF | L2 | LB | LM | LK | LW | ϕMM | P1 | PJ | PL | ϕRR | RT | SW | SW2 | TG | VD | WH | ZA | ZM | ZX | ZZ |
|-------------|----|----|------|------|-----|----|-----|----|-----|----|----|----|-----------|-----|----|-----|-----------|----|----|-----|------|----|----|----|----|----|----|
| 32 | 46 | 47 | G1/8 | 19,8 | 5,2 | 11 | M8 | 7 | 5,3 | 10 | 2 | 5 | 12 | 2,5 | 29 | 7,5 | 5,2 | M6 | 10 | 17 | 32,5 | 4 | 14 | 44 | 72 | 68 | 82 |
| 40 | 56 | 57 | G1/8 | 23,3 | 5,2 | 15 | M10 | 7 | 5,3 | 10 | 2 | 5 | 16 | 2,5 | 30 | 7,5 | 5,2 | M6 | 13 | 19 | 38 | 4 | 14 | 45 | 73 | 69 | 83 |
| 50 | 66 | 67 | G1/8 | 29,7 | 6,2 | 19 | M12 | 10 | 6,5 | 12 | 2 | 6 | 20 | 2,5 | 30 | 7,5 | 6,6 | M8 | 17 | 24 | 46,5 | 5 | 18 | 45 | 81 | 75 | 93 |
| 63 | 79 | 80 | G1/8 | 35,4 | 6,2 | 25 | M12 | 10 | 6,5 | 12 | 2 | 6 | 20 | 2,5 | 35 | 7,5 | 6,6 | M8 | 17 | 24 | 56,5 | 5 | 18 | 50 | 86 | 80 | 98 |



Double-acting cylinder with non-rotating rod RQ 200... / RQ 220...* series extended piston



If it is necessary to remove the flange from the rod, oppose the force needed to unscrew it by using exclusively the hexagon wrench SW2.

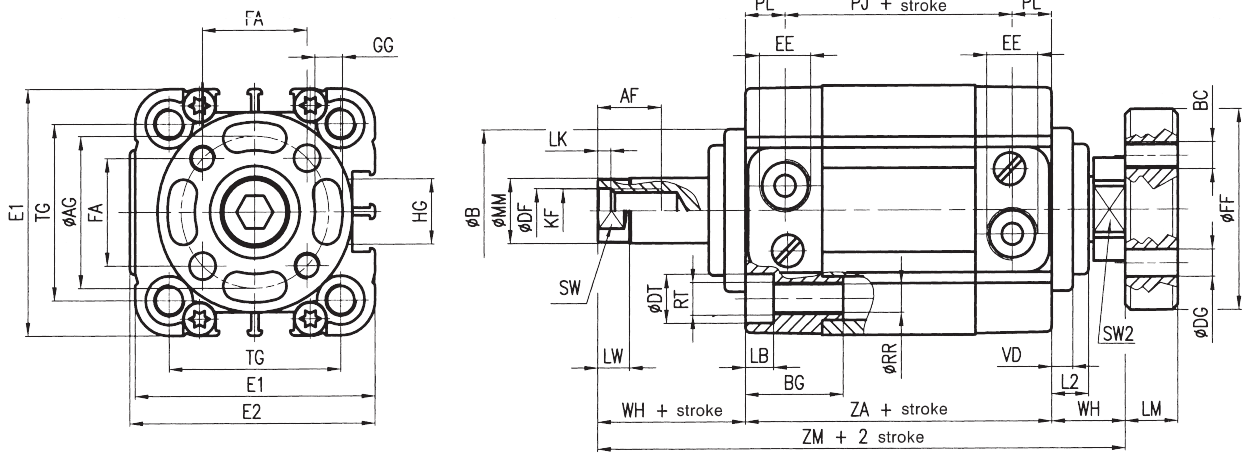
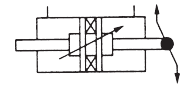
Mass RQ 200...

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 240 | 2,65 | 94 | 0,9 |
| 40 | 386 | 4 | 148,5 | 1,6 |
| 50 | 587 | 5,6 | 247 | 2,5 |
| 63 | 894 | 6,55 | 354 | 2,5 |

Mass RQ 220...

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 326,5 | 2,65 | 146,5 | 0,9 |
| 40 | 522 | 4 | 237 | 1,6 |
| 50 | 839 | 5,6 | 397 | 2,5 |
| 63 | 1249,5 | 6,55 | 583 | 2,5 |

Double-acting cylinder non rotating through rod RQ 201... series



Mass

| Cyl. Ø | AF | AG | B | BC | BG | ØD1 H11 | Ø DF | Ø DG | Ø DT | E1 | E2 | EE | FA | Ø FF |
|--------|----|----|----|----|----|---------|------|------|------|----|----|------|------|------|
| 32 | 12 | 28 | 30 | M5 | 18 | 14 | 8,2 | 5 | 9 | 46 | 47 | G1/8 | 19,8 | 37 |
| 40 | 16 | 33 | 35 | M5 | 18 | 14 | 10,2 | 5 | 9 | 56 | 57 | G1/8 | 23,3 | 42 |
| 50 | 20 | 42 | 40 | M6 | 24 | 18 | 12,2 | 6 | 11 | 66 | 67 | G1/8 | 29,7 | 52 |
| 63 | 20 | 50 | 45 | M6 | 24 | 18 | 12,2 | 6 | 11 | 79 | 80 | G1/8 | 35,4 | 64 |

| Cyl. Ø | Cylinder stroke "0" (g) | Increase by mm stroke (g) | Moving part stroke "0" (g) | Increase by mm stroke (g) |
|--------|-------------------------|---------------------------|----------------------------|---------------------------|
| 32 | 270 | 3,55 | 120 | 1,8 |
| 40 | 431 | 5,6 | 189,5 | 3,2 |
| 50 | 663 | 8,1 | 317 | 5 |
| 63 | 969 | 9,05 | 424 | 5 |

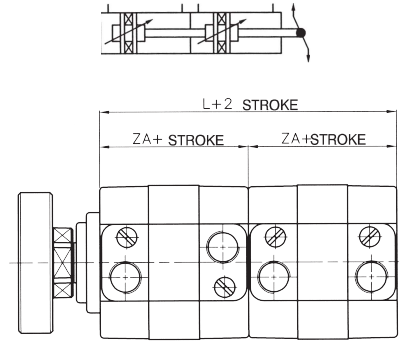
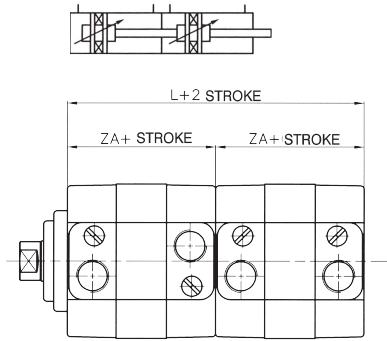
| Cyl. Ø | GG | HG | KF | L2 | LB | LM | LK | LW | Ø MM | P1 | PJ | PL | Ø RR | RT | SW | SW2 | TG | VD | VD 1 | WH | ZA | ZM | ZJ | ZX |
|--------|-----|----|-----|----|-----|----|----|----|------|-----|----|-----|------|----|----|-----|------|----|------|----|----|----|----|----|
| 32 | 5,2 | 11 | M8 | 7 | 5,3 | 10 | 2 | 5 | 12 | 2,5 | 29 | 7,5 | 5,2 | M6 | 10 | 17 | 32,5 | 4 | 3 | 14 | 44 | 72 | 58 | 68 |
| 40 | 5,2 | 15 | M10 | 7 | 5,3 | 10 | 2 | 5 | 16 | 2,5 | 30 | 7,5 | 5,2 | M6 | 13 | 19 | 38 | 4 | 3 | 14 | 45 | 73 | 59 | 69 |
| 50 | 6,2 | 19 | M12 | 10 | 6,5 | 12 | 2 | 6 | 20 | 2,5 | 30 | 7,5 | 6,6 | M8 | 17 | 24 | 46,5 | 5 | 3 | 18 | 45 | 81 | 63 | 75 |
| 63 | 6,2 | 25 | M12 | 10 | 6,5 | 12 | 2 | 6 | 20 | 2,5 | 34 | 7,5 | 6,6 | M8 | 17 | 24 | 56,5 | 5 | 3 | 18 | 49 | 85 | 67 | 79 |

* For cylinder types with extended piston, dimensions PJ, ZA and ZJ, ZX will be increased by 20 mm (Ø 32-40 mm), and 25 mm (Ø 50-63 mm).

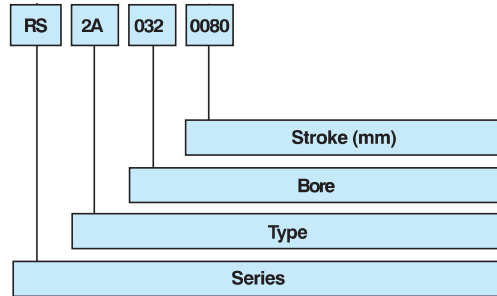


**Tandem cylinder
(double thrust
and traction force)**

| Cyl. Ø* | ZA | L |
|---------|----|----|
| 32 | 44 | 88 |
| 40 | 45 | 90 |
| 50 | 45 | 90 |
| 63 | 49 | 98 |



Codification key



SERIES

- RS Round tandem cylinder
- RO Octagonal tandem cylinder

TYPE

Stainless steel rod

- 1A Female rod
- 3A Male rod

Chromium-plated steel rod

- 2A Female rod
- 4A Male rod

BORE

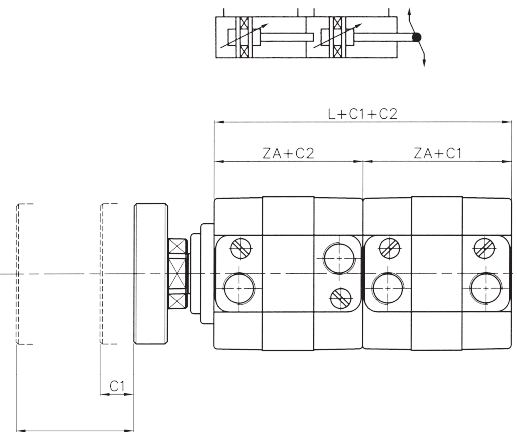
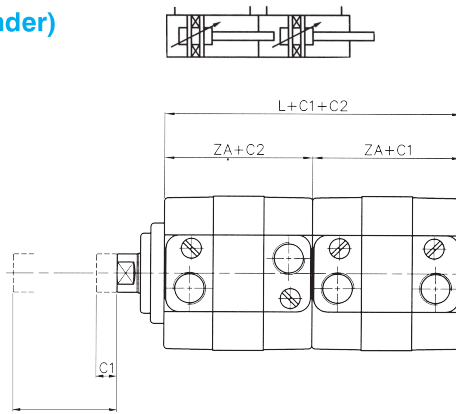
032-040-050-063 mm

STROKE

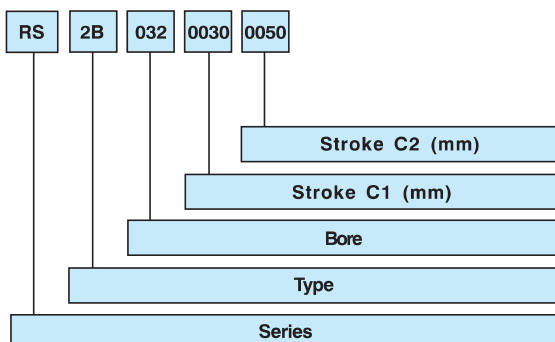
Page 38-I

**Cylinder with independent rods
(multiple position cylinder)**

| Cyl. Ø* | ZA | L |
|---------|----|----|
| 32 | 44 | 88 |
| 40 | 45 | 90 |
| 50 | 45 | 90 |
| 63 | 49 | 98 |



Codification key



SERIES

- RS Round cylinder with independent rods
- RO Octagonal cylinder with independent rods

TYPE

Stainless steel rod

- 1B Female rod
- 3B Male rod

Chromium-plated steel rod

- 2B Female rod
- 4B Male rod

BORE

032-040-050-063 mm

STROKE 1

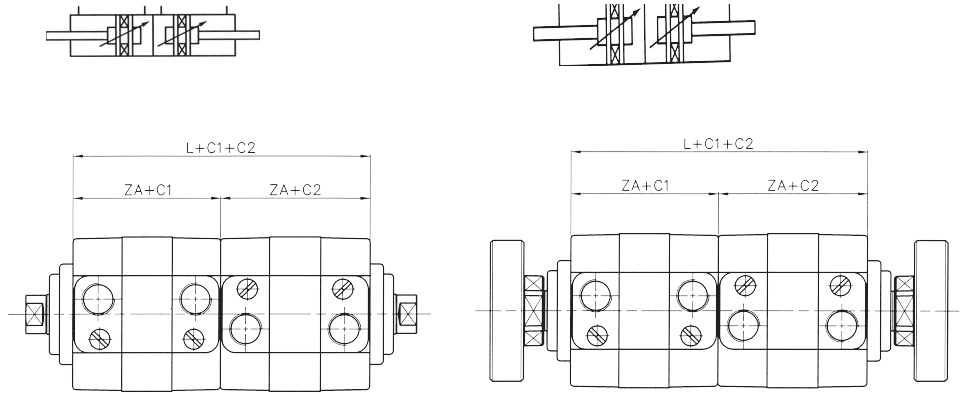
Stroke rear cylinder (page 38-I).

STROKE 2

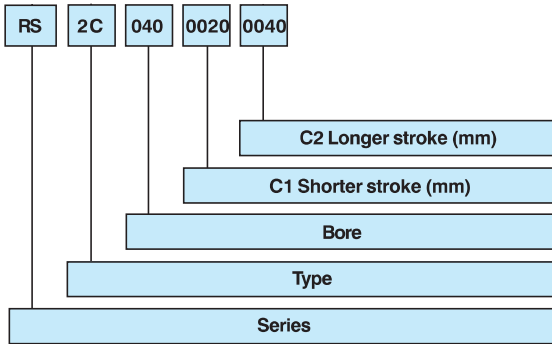
Effective stroke front cylinder (page 38-I).

Opposed cylinder

| Cyl. Ø* | ZA | L |
|---------|----|----|
| 32 | 44 | 88 |
| 40 | 45 | 90 |
| 50 | 45 | 90 |
| 63 | 49 | 98 |



Codification key



SERIES

- RS** Round cylinder with opposed rods
- RO** Octagonal cylinder with opposed rods

TYPE

- Stainless steel rod**
- 1C** Female rod
 - 3C** Male rod
- Chromium-plated steel rod**
- 2C** Female rod
 - 4C** Male rod

BORE

032-040-050-063 mm

STROKE 1

Page 38-I

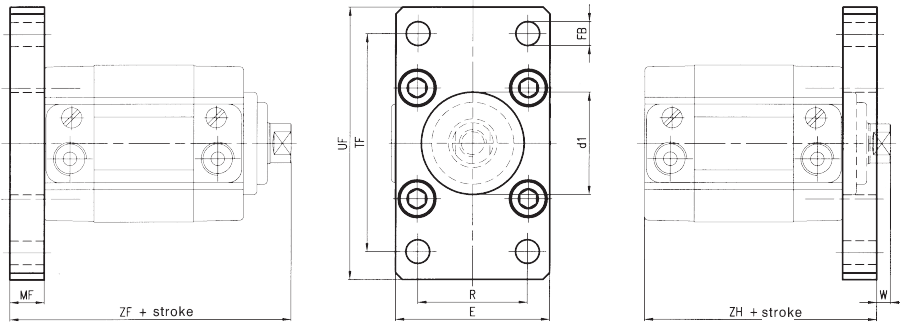
STROKE 2

Page 38-I

* For all other dimensions please refer to the standard version on pages 41 and 46.



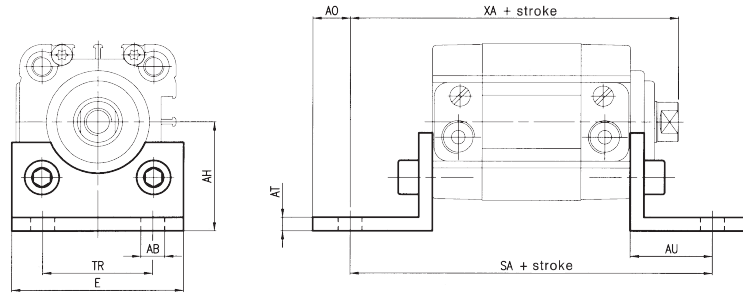
Front and rear flange in zinc-plated steel, ISO MF1-MF2



| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | KF-12032 | 0,20 |
| 40 | KF-12040 | 0,25 |
| 50 | KF-12050 | 0,50 |
| 63 | KF-12063 | 0,65 |

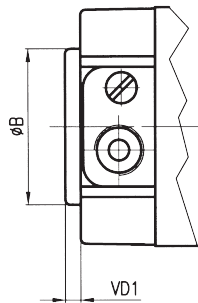
Angle bracket in zinc-plated steel, ISO MS1

Fixing screws page 51



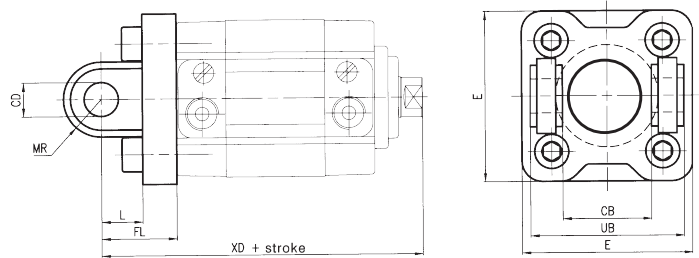
| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | KF-13032 | 0,07 |
| 40 | KF-13040 | 0,09 |
| 50 | KF-13050 | 0,20 |
| 63 | KF-13063 | 0,20 |

Adaptor ring for rear centering ISO (upon request)



| Cyl. Ø | Part number |
|--------|-------------|
| 32 | RSF-09032 |
| 40 | RSF-09040 |
| 50 | RSF-09050 |
| 63 | RSF-09063 |

Rear female hinge in die-cast aluminium with pin in zinc-plated steel ISO MP2



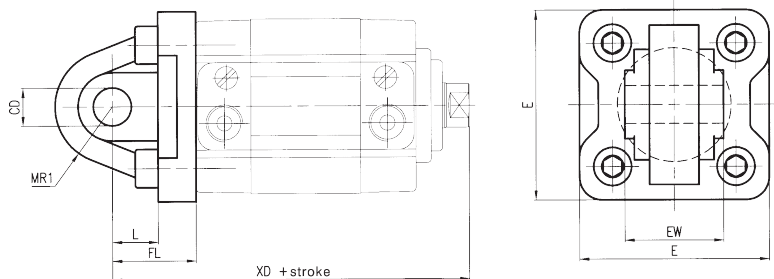
| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | KF-10032A | 0,06 |
| 40 | KF-10040A | 0,08 |
| 50 | KF-10050A | 0,15 |
| 63 | KF-10063A | 0,25 |

By removing the pin it is possible to use the female hinge also in front.

| Flange | | | | | | | | | | Bracket | | | | | | Adaptor ring | | Female hinge with pin | | | | | | | | | | | |
|--------|---------|----|---------|---|----|--------|---------|-----|----|---------|---------|---------|----|----|----------|--------------|-----|-----------------------|----|----|-----|--------|--------|----|----|----|----|--------|----|
| Cyl. Ø | Ød1 H11 | E | ØFB H13 | W | MF | R Js14 | TF Js14 | UF | ZF | ZH | ØAB H13 | AH Js15 | AO | AT | AU ± 0.2 | E | SA | TR | XA | ØB | VD1 | CB H14 | ØCD H9 | E | FL | L | MR | UB h14 | XD |
| 32 | 30 | 45 | 7 | 4 | 10 | 32 | 64 | 80 | 68 | 54 | 7 | 32 | 6 | 4 | 24 | 45 | 92 | 32 | 82 | 30 | 3 | 26 | 10 | 48 | 22 | 12 | 11 | 45 | 80 |
| 40 | 35 | 52 | 9 | 4 | 10 | 36 | 72 | 90 | 69 | 55 | 9 | 36 | 8 | 4 | 28 | 52 | 101 | 36 | 87 | 35 | 3 | 28 | 12 | 54 | 25 | 15 | 13 | 52 | 84 |
| 50 | 40 | 65 | 9 | 6 | 12 | 45 | 90 | 110 | 75 | 57 | 9 | 45 | 10 | 5 | 32 | 64 | 109 | 45 | 95 | 40 | 3 | 32 | 12 | 65 | 27 | 15 | 13 | 60 | 90 |
| 63 | 45 | 75 | 9 | 6 | 12 | 50 | 100 | 120 | 79 | 61 | 9 | 50 | 12 | 5 | 32 | 74 | 113 | 50 | 99 | 45 | 3 | 40 | 16 | 75 | 32 | 20 | 17 | 70 | 99 |

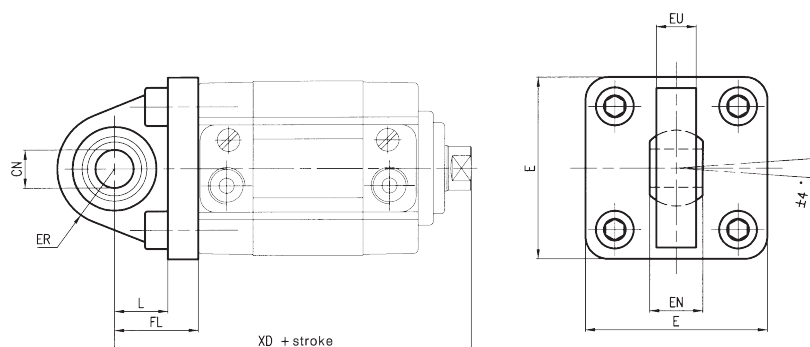


Rear male hinge in die-cast aluminium ISO MP4 without pin



| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | KF-11032 | 0,20 |
| 40 | KF-11040 | 0,25 |
| 50 | KF-11050 | 0,50 |
| 63 | KF-11063 | 0,65 |

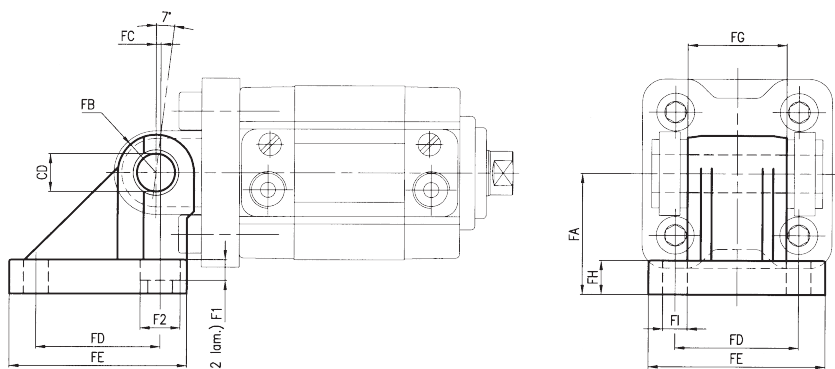
Articulated male hinge in die-cast aluminium



| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | KF-11032S | 0,10 |
| 40 | KF-11040S | 0,20 |
| 50 | KF-11040S | 0,30 |
| 63 | KF-11063S | 0,35 |

Counter-hinge 90° in die-cast aluminium

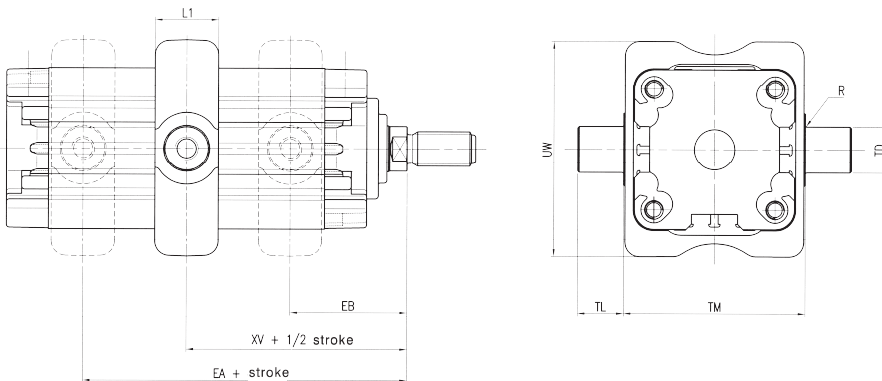
Fixing screws page 51



| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | KF-19032 | 0,09 |
| 40 | KF-19040 | 0,12 |
| 50 | KF-19050 | 0,20 |
| 63 | KF-19063 | 0,32 |

| Rear male hinge | | | | | | | | Articulated male hinge | | | | | | | Counter-hinge | | | | | | | | | | | |
|-----------------|--------|----|--------------------|----|----|-----|----|------------------------|----|----|----|------|----|------|---------------|--------|---------|----|-----|------|------|--------------|------|-----|-----|------|
| Cyl. Ø | ØCD H9 | E | EW toll. -0.2/-0.6 | FL | L | MR1 | XD | ØCN H9 | E | EN | ER | EU | FL | L | XD | ØCD H9 | FA Js15 | FB | FC | FD | FE | FG -0.2/-0.6 | FH | FI | F1 | F2 |
| 32 | 10 | 48 | 26 | 22 | 12 | 15 | 80 | 10 | 48 | 14 | 15 | 10.5 | 22 | 14 | 80 | 10 | 32 | 10 | 1.2 | 32.5 | 46.5 | 26 | 9 | 6.4 | 5.5 | 10.5 |
| 40 | 12 | 54 | 28 | 25 | 15 | 18 | 84 | 12 | 54 | 16 | 18 | 12 | 25 | 16.5 | 84 | 12 | 36 | 12 | 2.6 | 38 | 51.5 | 28 | 9 | 6.4 | 5.5 | 10.5 |
| 50 | 12 | 65 | 32 | 27 | 15 | 20 | 90 | 12 | 65 | 16 | 20 | 12 | 27 | 17.5 | 90 | 12 | 45 | 12 | 0.3 | 46.5 | 63.5 | 32 | 9 | 8.4 | 5 | 13.5 |
| 63 | 16 | 75 | 40 | 32 | 20 | 23 | 99 | 16 | 75 | 21 | 23 | 15 | 32 | 21.5 | 99 | 16 | 50 | 16 | 3.3 | 56.5 | 73.5 | 40 | 10.5 | 8.4 | 5 | 13.5 |

Intermediate hinge with grub screws



| Cyl. Ø | EA (max) | EB (min) | I1 (max) | R (max) | TD (e9) | TL (h14) | TM (h14) | UW (max) | XV | |
|--------|----------|----------|----------|---------|---------|----------|----------|----------|------|------|
| | | | | | | | | | Nom. | Tol. |
| 32 | 31 | 41 | 22 | 0,5 | 12 | 12 | 50 | 65 | 36 | ±2 |
| 40 | 32 | 41 | 22 | 0,5 | 16 | 16 | 63 | 75 | 36,5 | ±2 |
| 50 | 36 | 45 | 22 | 1 | 16 | 16 | 75 | 95 | 40,5 | ±2 |
| 63 | 37 | 48 | 28 | 1 | 20 | 20 | 90 | 105 | 42,5 | ±2 |

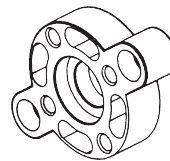
| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | KDF-14032 | 0,13 |
| 40 | KDF-14040 | 0,24 |
| 50 | KDF-14050 | 0,32 |
| 63 | KDF-14063 | 0,47 |

Flange for female rod in die-cast aluminium, (with fixing screw standard supplied with octagonal cylinders RQ series)



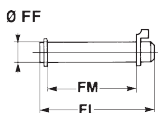
| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | RPF-28032 | 0,024 |
| 40 | RSF-28040 | 0,035 |
| 50 | RSF-28050 | 0,057 |
| 63 | RSF-28063 | 0,094 |

Flange for rod with non-rotating device in die-cast aluminium for RS210.../RS211... series (fixing screws included)



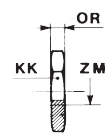
| Cyl. Ø | Part number | Mass kg |
|--------|-------------|---------|
| 32 | RPF-29032 | 0,026 |
| 40 | RSF-29040 | 0,036 |
| 50 | RSF-29050 | 0,065 |
| 63 | RSF-29063 | 0,100 |

Pin in zinc-plated steel with 2 circlips



| Cyl. Ø | FF f8 | FL | FM | Mass kg | Part number |
|--------|-------|------|----|---------|-------------|
| 32 | 10 | 53 | 46 | 0,03 | KF-18032 |
| 40 | 12 | 61,3 | 53 | 0,05 | KF-18040 |
| 50 | 12 | 69 | 61 | 0,05 | KF-18050 |
| 63 | 16 | 80,5 | 71 | 0,12 | KF-18063 |

Rod nut in zinc-plated steel



| Cyl. Ø | ZM | KK | OR | Part number |
|--------|----------|----|----|-------------|
| 32 | M10x1,25 | 17 | 6 | KF-16032 |
| 40 | M12x1,25 | 19 | 7 | KF-16040 |
| 50-63 | M16x1,5 | 24 | 8 | KF-16050 |

Fixing screws for accessories

Cylindrical screw UNI 5931 Part n° AZ4-VN... suitable for mounting elements KF-12... and KF-13... series

| Cyl. Ø | Screw | Part number |
|--------|---------|-------------|
| 32-40 | M6 x 20 | AZ4-VN0620 |
| 50-63 | M8 x 25 | AZ4-VN0825 |

Cylindrical screw UNI 5931 Part n° AZ4-VN... suitable for mounting elements KF-10... KF-11... series

| Cyl. Ø | Screw | Part number |
|--------|---------|-------------|
| 32-40 | M6 x 25 | AZ4-VN0625 |
| 50-63 | M8 x 30 | AZ4-VN0830 |

Cylindrical screw UNI 5931 Part n° AZ4-VN... suitable for mounting elements KF-19... series (Ø 32-40)

| Cyl. Ø | Screw 2 pcs. per type | Part number |
|--------|-----------------------|-------------|
| 32-40 | M6 x 20 | AZ4-VN0620 |
| | M6 x 25 | AZ4-VN0625 |

Cylindrical screw UNI 5931 Part n° AZ4-VN... suitable for mounting elements KF-19... series (Ø 50-63)

| Cyl. Ø | Screw 2 pcs. per type | Part number |
|--------|-----------------------|-------------|
| 50-63 | M8 x 25 | AZ4-VPA0825 |
| | M8 x 30 | AZ4-VPA0830 |

