

ORDER
ONLINE



Cylinders



ISO 6432 Series
Metric Mini Cylinder Line

We're everywhere you need us to be!



ISO 6432

| | |
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ISO 6432 Metric Mini Cylinders



The **ISO 6432 Series** is a metric, ISO standard, mini cylinder line. The ISO 6432 Series includes a multitude of standard features and benefits.

Tube

The type 303 stainless steel tube, is drawn and polished to a micro-inch finish on the I.D. This enables low friction and longevity.

End Caps

The **end caps** are accurately machined from solid aluminum bar stock. They are anodized for corrosion resistance.

Rod Bushing

Oil impregnated sintered bronze **rod bushing** provides excellent wear resistance and anti-friction qualities for smooth operation and long life.

Piston

High strength anodized aluminum alloy **piston** is standard on 32 mm through 63 mm bores. A durable brass piston is standard on 8 mm through 25 mm bores.

Piston Seals

Low friction Buna N "U" cup **piston seals** (optional high temperature seals) are wear compensating for millions of maintenance free cycles.

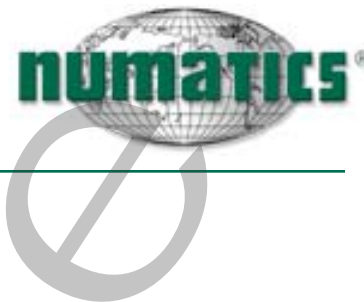
Rod Seal

The low friction Buna N "U" cup **rod seal** (optional high temperature seals) is wear compensating to ensure longevity.

Standard Specifications:

- Mini cylinders with piston diameter from 8 to 25 mm correspond to standard ISO 6432 CETOP RP 52 P
- Bore sizes from 8 mm through 63 mm
- Nominal pressure rating is 150 psi air (10 bar)
- Standard temperature -10°F to 165°F (-23°C to 74°C)
- Adjustable cushions





How To Order

O R 025/0080

Series

- O = Standard
- S = All Stainless Steel

Cylinder Type

- K = Single acting, single rod end, w/o magnetic sensor
- M = Double acting, single rod end, w/o magnetic sensor
- P = Double acting, single rod end, with magnetic sensor
- S = Double acting, single rod end, w/o magnetic sensor, with cushioning
- R = Double acting, single rod end, with magnetic sensor, with cushioning

Piston Diameter (Type)

- 008 = 8mm (OK, OP)
- 010 = 10mm (OK, OP)
- 012 = 12mm (OK, **OP**)
- 016 = 16mm (OK, **OP, OR**, OS, SM, SP)
- 020 = 20mm (OK, **OP, OR**, OS, SM, SP)
- 025 = 25mm (OK, **OP, OR**, OS, SM, SP)
- 032 = 32mm (OK, OM, OP, OR, OS, SM, SP, SR)
- 040 = 40mm (OK, OM, OP, OR, OS, SM, SP, SR)
- 050 = 50mm (OK, OM, OP, OR, OS, SM, SP, SR)
- 063 = 63mm (OK, OM, OP, OR, OS, SM, SP, SR)

Standard Strokes

- 0010 = 10mm (OK, OM, OP, SM, SP)
- 0025 = 25mm (OK, OM, **OP, OR**, OS, SM, SP, SR)
- 0050 = 50mm (OK, OM, **OP, OR**, OS, SM, SP, SR)
- 0080 = 80mm (OM, **OP, OR**, OS, SM, SP, SR)
- 0100 = 100mm (OM, **OP, OR**, OS, SM, SP, SR)
- 0125 = 125mm (OM, OP, OR, OS, SM, SP, SR)
- 0160 = 160mm (OM, OP, **OR**, OS, SM, SP, SR)
- 0200 = 200mm (OM, OP, **OR**, OS, SM, SP, SR)
- 0250 = 250mm (OM, OP, OR, OS, SM, SP, SR)
- 0320 = 320mm (OM, OP, OR, OS, SM, SP, SR)
- 0400 = 400mm (OM, OP, OR, OS, SM, SP, SR)
- 0500 = 500mm (OM, OP, OR, OS, SM, SP, SR)

**Mounting Accessories

- Clevis Bracket
- Female Flange
- Flange
- Foot
- Male Flange
- Pivot
- Rod Nut

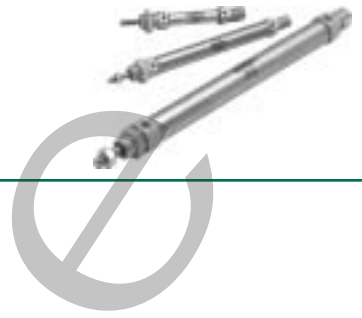
Piston Diameter

- 12, 16, 20, 25, 32, 40, 50, 63
- 32, 40, 50, 63, 80, 100
- 12, 16, 20, 25, 32, 40, 50, 63
- 12, 16, 20, 25, 32, 40, 50, 63
- 32, 40, 50, 63, 80, 100
- 32, 40, 50, 63
- 12, 16, 20, 25, 32, 40, 50, 63

Viton® is a registered trademark of DuPont Dow Elastomers.

WEIGHTS (kg)

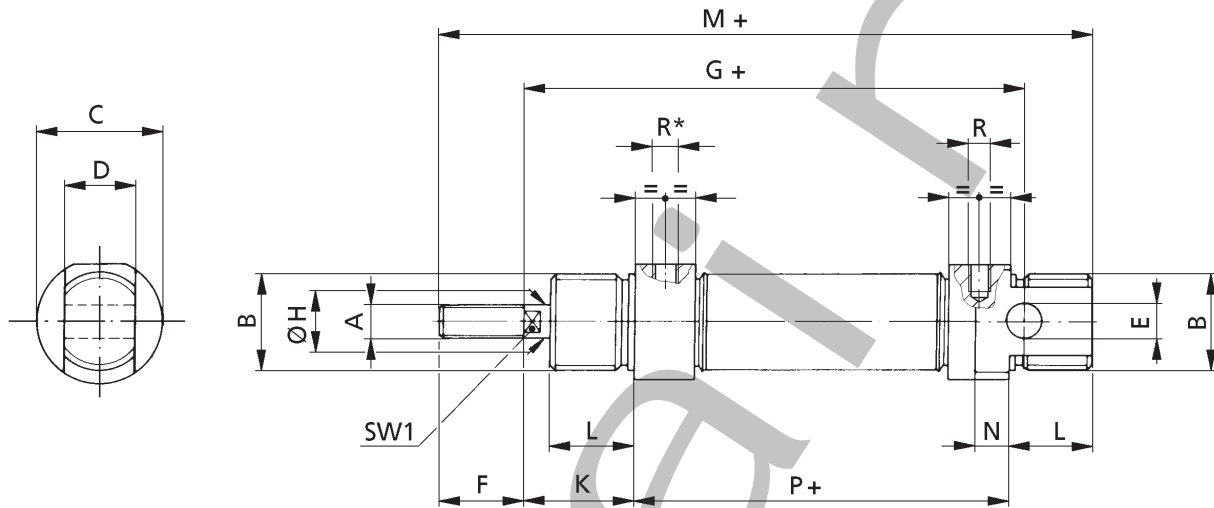
| Cylinder type OK; OM; or OP, piston diameter | 8 | 10 | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
|---|------|------|------|------|------|------|------|------|------|------|
| 0 mm stroke | 0.04 | 0.08 | 0.10 | 0.12 | 0.20 | 0.28 | 0.45 | 0.82 | 1.33 | 2.37 |
| to be added per 100 mm stroke | 0.01 | 0.01 | 0.03 | 0.03 | 0.05 | 0.07 | 0.10 | 0.13 | 0.22 | 0.23 |
| Cylinder type OS; OR; SM or SP, piston diameter | | | | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
| 0 mm stroke | | | | 0.12 | 0.20 | 0.28 | 0.45 | 0.82 | 1.33 | 2.37 |
| to be added per 100 mm stroke | | | | 0.03 | 0.05 | 0.07 | 0.10 | 0.13 | 0.22 | 0.23 |



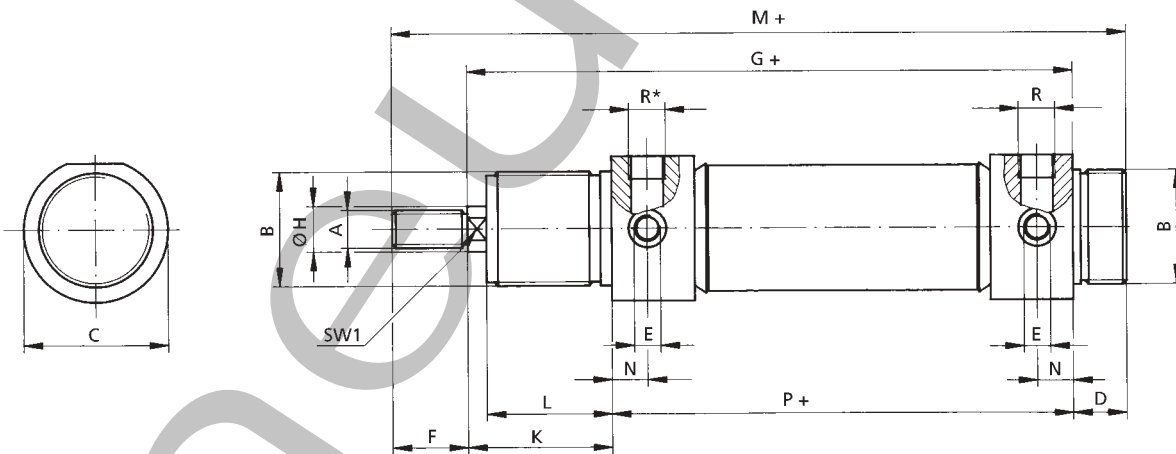
Single Rod End, Single and Double Acting

Mini Cylinder type OK; OM; OP; OS; OR; SM; SP

Piston Diameters from 8 mm to 25 mm, to DIN/ISO 6432 CETOP RP 52 P

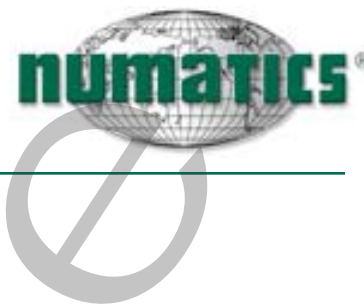


Piston Diameters from 32 mm to 63 mm

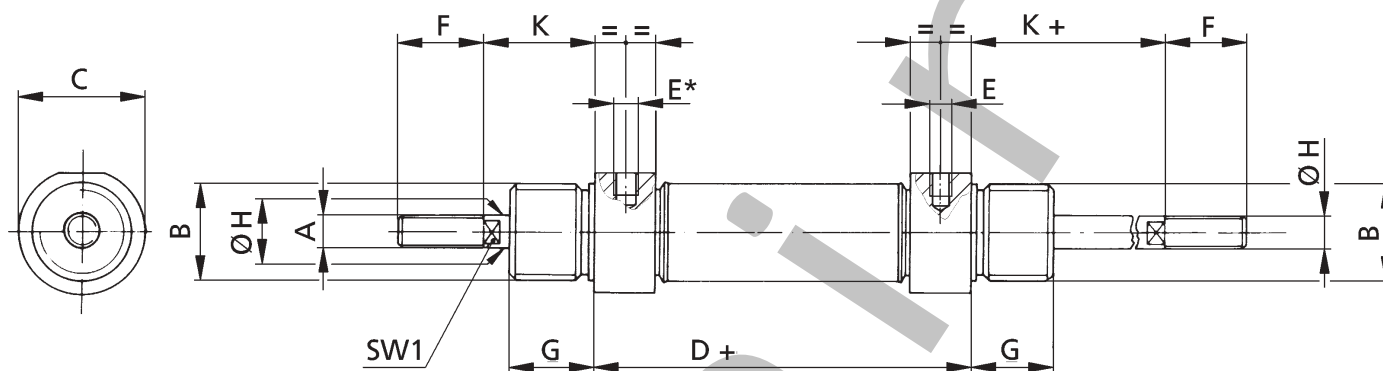


| PISTON DIA. | A | B | C | D | E | F | G | H | K | L | M | N | P | R* | SW1 |
|-------------|----------|----------|------|------|---------|------|-------|------|------|------|-------|------|-------|-------|-----|
| 8 | M4 | M12x1.25 | 16.0 | 8.0 | 4.0 | 12.0 | 64.0 | 4.0 | 16.0 | 12.0 | 86.0 | 6.0 | 46.0 | M5 | — |
| 10 | M4 | M12x1.25 | 16.0 | 8.0 | 4.0 | 12.0 | 64.0 | 4.0 | 16.0 | 12.0 | 86.0 | 6.0 | 46.0 | M5 | — |
| 12 | M6 | M16x1.5 | 19.0 | 12.0 | 6.0 | 16.0 | 75.0 | 6.0 | 22.0 | 18.0 | 104.0 | 9.0 | 48.0 | M5 | 5 |
| 16 | M6 | M16x1.5 | 19.0 | 12.0 | 6.0 | 16.0 | 82.0 | 6.0 | 22.0 | 18.0 | 109.0 | 9.0 | 53.0 | M5 | 5 |
| 20 | M8 | M22x1.5 | 27.0 | 16.0 | 8.0 | 20.0 | 95.0 | 8.0 | 24.0 | 20.0 | 131.0 | 12.0 | 68.0 | G 1/8 | 7 |
| 25 | M10x1.25 | M22x1.5 | 30.0 | 16.0 | 8.0 | 22.0 | 104.0 | 10.0 | 28.0 | 22.0 | 140.0 | 12.0 | 68.0 | G 1/8 | 9 |
| 32 | M10 | M30x1.5 | 38.0 | 14.0 | M8x1 | 20.0 | 134.0 | 12.0 | 38.0 | 30.0 | 168.0 | 9.0 | 96.0 | G 1/8 | 10 |
| 40 | M12 | M38x1.5 | 46.0 | 16.0 | M10x1 | 24.0 | 158.0 | 14.0 | 45.0 | 35.0 | 198.0 | 12.0 | 113.0 | G 1/4 | 12 |
| 50 | M16 | M45x1.5 | 57.0 | 18.0 | M12x1.5 | 32.0 | 170.0 | 18.0 | 50.0 | 38.0 | 220.0 | 12.0 | 120.0 | G 1/4 | 16 |
| 63 | M16 | M45x1.5 | 70.0 | 18.0 | M12x1.5 | 31.0 | 175.0 | 18.0 | 51.0 | 38.0 | 224.0 | 12.0 | 124.0 | G 3/8 | 16 |

*This dimension does not apply for OK



Single and Double Acting - Double Rod



Cylinder Forces (single acting)

| CYLINDER TYPE | PISTON DIAMETER [mm] | THRUST AT 6 BAR/87 PSIG [N] (lbs) | STROKE 10 mm (inch) | SPRING RESISTANCE [N] | | |
|---------------|----------------------|-----------------------------------|---------------------|-----------------------|--------------|------------------------|
| | | | | MINIMUM STROKE 25 mm | STROKE 50 mm | MAXIMUM STROKE 10 - 50 |
| OK; OI | 8 | 18.5 (4) | 3.4 (0.75) | 3.9 (0.88) | 3.2 (0.72) | 4.5 (1.01) |
| OK; OI | 10 | 34.3 (7) | 3.8 (0.85) | 4.5 (1.01) | 3.5 (0.87) | 5.7 (1.28) |
| OK; OI | 12 | 46.5 (10) | 5.2 (1.17) | 6.0 (1.35) | 4.7 (1.06) | 7.5 (1.69) |
| OK; OI | 16 | 84.8 (19) | 12.8 (2.87) | 15.4 (3.46) | 11.0 (2.47) | 20.2 (4.54) |
| OK; OI | 20 | 115.3 (26) | 18.4 (4.14) | 22.6 (5.08) | 7.0 (1.57) | 28.1 (6.31) |
| OK; OI | 25 | 232.2 (52) | 24.4 (5.49) | 27.2 (6.11) | 22.3 (5.01) | 32.7 (7.35) |
| OK | 32 | 427.5 (96) | 56.0 (12.59) | 51.0 (11.46) | 42.0 (9.44) | 60.0 (13.48) |
| OK | 40 | 657.4 (148) | 60.0 (13.49) | 55.0 (12.36) | 44.0 (9.89) | 65.0 (14.61) |
| OK | 50 | 1075.2 (242) | 64.0 (14.39) | 57.0 (12.81) | 46.0 (10.34) | 68.0 (15.29) |
| OK | 63 | 1752.3 (394) | 65.0 (14.61) | 58.0 (13.04) | 47.0 (10.57) | 70.0 (15.73) |

Cylinder Forces (double acting)

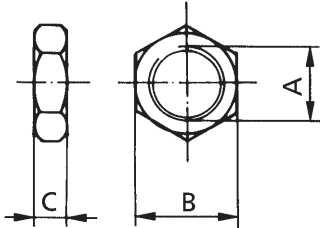
| CYLINDER TYPE | PISTON DIAMETER [mm] | THRUST AT 6 BAR [N] | RETRACT AT 6 BAR [N] |
|------------------------|----------------------|---------------------|----------------------|
| OM; OP; | 8 | 23.0 (5.17) | 15.0 (3.37) |
| OM; OP | 10 | 40.0 (8.99) | 32.0 (7.19) |
| OM; OP | 12 | 54.0 (12.14) | 37.0 (8.32) |
| OM; OP; OS; OR; SP; SM | 16 | 105.0 (23.60) | 88.0 (19.78) |
| OM; OP; OS; OR; SP; SM | 20 | 172.0 (38.67) | 142.0 (31.92) |
| OM; OP; OS; OR; SP; SM | 25 | 265.0 (59.51) | 218.0 (49.00) |
| OM; OP; OS; OR | 32 | 440.0 (98.91) | 380.0 (85.42) |
| OM; OP; OS; OR | 40 | 690.0 (155.11) | 600.0 (134.88) |
| OM; OP; OS; OR | 50 | 1100.0 (247.28) | 950.0 (213.56) |
| OM; OP; OS; OR | 63 | 1770.0 (397.90) | 1650.0 (370.92) |



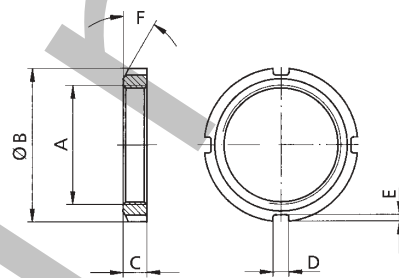
Mounting Accessories

Nut for Additional Mounting Accessories (Mini Cylinders)

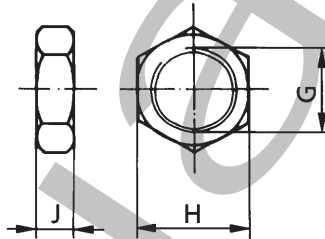
Nut for end cap,
piston diameters from 8 to 25 mm



Nut for end cap,
piston diameters from 32 to 63 mm



Nut for piston rod,
piston diameters from 8 to 63 mm



Weights

| kg (oz) | ORDER CODE | kg (oz) | ORDER CODE |
|---------------|------------|---------------|------------|
| 0.008 (0.282) | 128-217 | 0.003 (0.106) | 128-301 |
| 0.010 (0.352) | 128-218 | 0.012 (0.423) | 128-303 |
| 0.015 (0.529) | 128-219 | 0.018 (0.634) | 128-304 |
| 0.044 (1.55) | 128-228 | 0.006 (0.212) | 44.1361 |
| 0.067 (2.36) | 128-229 | 0.008 (0.282) | 44.1359 |
| 0.066 (2.33) | 128-230 | 0.011 (0.388) | 128-225 |
| 0.002 (0.071) | 128-220 | 0.016 (0.564) | 128-226 |
| 0.002 (0.071) | 128-221 | 0.032 (1.13) | 128-227 |
| 0.005 (0.176) | 128-222 | | |
| 0.010 (0.352) | 128-223 | | |

Dimensions (mm)

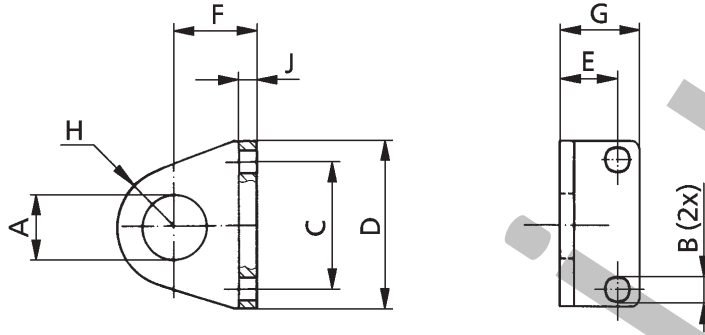
| PISTON DIAMETER [mm] | | | | | | | | | | | ORDER CODE | | | |
|----------------------------|----------|------|-----|-----|-----|-----|----------|------|------|-------------|------------|----------------|-----------|--|
| | A | B | C | D | E | F | G | H | J | (END CAPS)* | | (PISTON DIA.)* | | |
| | | | | | | | | | | GALV. STEEL | STAINLESS | GALV. STEEL | STAINLESS | |
| 8/10 | M12x1.25 | 19.0 | 7.0 | — | — | — | M4 | 7.0 | 3.2 | 128-217 | — | 128-220 | — | |
| 12/16 | M16x1.5 | 24.0 | 8.0 | — | — | — | M6 | 10.0 | 5.0 | 128-218 | 128-303 | 128-221 | 128-301 | |
| 20 | M22x1.5 | 27.0 | 8.0 | — | — | — | M8 | 13.0 | 6.5 | 128-219 | 128-304 | 128-222 | 44.1361 | |
| 25 | M22x1.5 | 27.0 | 8.0 | — | — | — | M10x1.25 | 17.0 | 8.0 | 128-219 | 128-304 | 128-223 | 44.1359 | |
| 32 | M30x1.5 | 45.0 | 7.0 | 5.0 | 2.0 | 30° | M10 | 17.0 | 8.0 | 128-228 | — | — | 128-225 | |
| 40 | M38x1.5 | 50.0 | 8.0 | 6.0 | 2.0 | 30° | M12 | 19.0 | 10.0 | 128-229 | — | — | 128-226 | |
| 50/63 | M45x1.5 | 58.0 | 9.0 | 6.0 | 2.5 | 30° | M16 | 24.0 | 13.0 | 128-230 | — | — | 128-227 | |

*1 nut each included



Mounting Accessories

Foot Bracket for Piston Diameters 8 mm to 63 mm



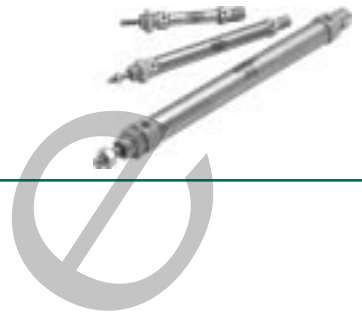
Weights

| APPROX. [kg] | ORDER CODE |
|--------------|------------|
| 0.010 | 155-114 |
| 0.020 | 155-115 |
| 0.045 | 155-116 |
| 0.115 | 155-138 |
| 0.215 | 155-139 |
| 0.315 | 155-140 |
| 0.022 | 155-236 |
| 0.050 | 155-237 |

Dimensions (mm)

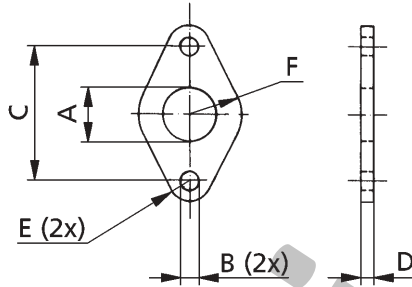
| PISTON DIA. [mm] | A | B | C | D | E | F | G | H | J | ORDER CODE | |
|---------------------|------|-----|------|------|------|------|------|------|-----|------------------|-----------------|
| | | | | | | | | | | GALVANIZED STEEL | STAINLESS STEEL |
| 8/10 | 12.0 | 4.5 | 25.0 | 35.0 | 11.0 | 16.0 | 16.0 | 10.0 | 3.0 | 155-114 | — |
| 12/16 | 16.0 | 5.5 | 32.0 | 42.0 | 14.0 | 20.0 | 20.0 | 13.4 | 4.0 | 155-115 | 155-236 |
| 20/25 | 22.0 | 6.6 | 40.0 | 54.0 | 17.0 | 25.0 | 25.0 | 18.0 | 5.0 | 155-116 | 155-237 |
| 32 | 30.0 | 7.0 | 52.0 | 66.0 | 14.0 | 28.0 | 21.0 | — | 4.0 | 155-138 | — |
| 40 | 38.0 | 9.0 | 60.0 | 88.0 | 20.0 | 33.0 | 30.0 | — | 5.0 | 155-139 | — |
| 50/63 | 45.0 | 9.0 | 70.0 | 90.0 | 20.0 | 40.0 | 30.0 | — | 6.0 | 155-140 | — |

*For stainless steel information please contact your sales representative.



Mounting Accessories

Flange Mounting for Piston Diameters from 8 mm to 25 mm

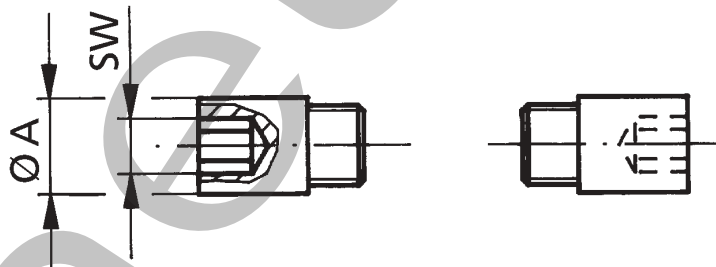


Dimensions (mm)

| PISTON DIA. [mm] | A | B | C | D | E | F | WEIGHT APPROX. [kg] | ORDER CODE | |
|---------------------|------|-----|------|-----|-----|------|------------------------|------------------|-----------------|
| | | | | | | | | GALVANIZED STEEL | STAINLESS STEEL |
| 8/10 | 12.0 | 4.5 | 30.0 | 3.0 | 5.0 | 12.5 | 0.012 | 155-111 | — |
| 12/16 | 16.0 | 5.5 | 40.0 | 4.0 | 6.0 | 15.0 | 0.026 | 155-112 | 155-226 |
| 20/25 | 22.0 | 6.6 | 50.0 | 5.0 | 8.0 | 20.0 | 0.050 | 155-113A | 155-246 |

*For stainless steel information please contact your sales representative.

Pivot for Piston Diameters from 32 mm to 50 mm



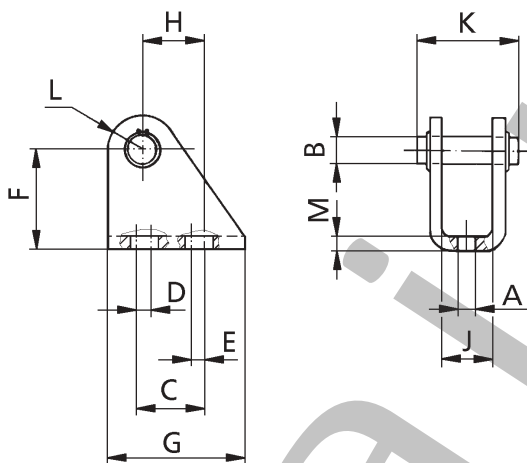
Dimensions (mm)

| PISTON DIA. [mm] | A | SW | WEIGHT APPROX. [kg] | ORDER CODE |
|---------------------|------|----|------------------------|------------------|
| | | | | GALVANIZED STEEL |
| 32 | 10.0 | 5 | 0.010 | 155-135 |
| 40 | 12.0 | 6 | 0.020 | 155-136 |
| 50 | 14.0 | 6 | 0.040 | 155-137 |



Mounting Accessories

Rear Clevis Bracket for Piston Diameters from 8 mm to 25 mm



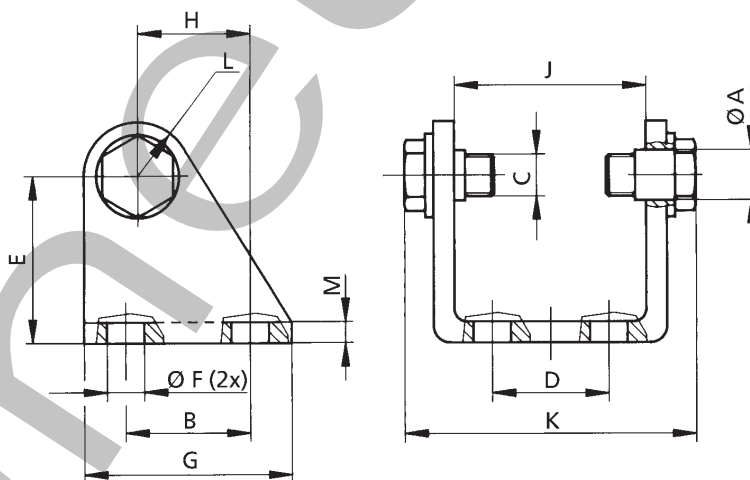
Weights

| APPROX. [kg] | ORDER CODE |
|--------------|------------|
| 0.020 | 155-117 |
| 0.036 | 155-118 |
| 0.078 | 155-119 |
| 0.039 | 155-228 |
| 0.085 | 155-229 |

Dimensions (mm)

| PISTON DIA. [mm] | A | B | C | D | E | F | G | H | J | K | L | M | ORDER CODE | |
|---------------------|-----|-----|------|-----|-----|------|------|------|------|------|------|-----|------------------|-----------------|
| | | | | | | | | | | | | | GALVANIZED STEEL | STAINLESS STEEL |
| 8/10 | 4.5 | 4.0 | 12.5 | — | — | 24.0 | 20.0 | 12.5 | 8.1 | 17.0 | 5.0 | 2.5 | 155-117 | — |
| 12/16 | 5.5 | 6.0 | 15.0 | — | 5.0 | 27.0 | 25.0 | 20.0 | 12.1 | 23.0 | 7.0 | 3.0 | 155-118A | 155-228 |
| 20/25 | 6.6 | 8.0 | 20.0 | 5.0 | — | 30.0 | 32.0 | 23.0 | 16.1 | 30.0 | 10.0 | 4.0 | 155-119A | 155-229 |

Rear Clevis Bracket for Piston Diameters from 32 mm to 63 mm



Dimensions (mm)

| PISTON DIA. [mm] | A | B | C | D | E | F | G | H | J | K | L | M | WEIGHT APPROX. [kg] | ORDER CODE |
|---------------------|------|------|---------|------|------|-----|------|------|------|-------|------|-----|------------------------|-------------|
| | | | | | | | | | | | | | | GALV. STEEL |
| 32 | 10.0 | 24.0 | M8x1 | 20.0 | 35.0 | 7.0 | 40.0 | 20.0 | 38.1 | 58.0 | 12.0 | 4.0 | 0.160 | 155-132 |
| 40 | 12.0 | 30.0 | M10x1 | 28.0 | 40.0 | 9.0 | 50.0 | 27.0 | 46.1 | 70.0 | 13.0 | 5.0 | 0.225 | 155-133 |
| 50 | 14.0 | 34.0 | M12x1.5 | 36.0 | 45.0 | 9.0 | 54.0 | 30.0 | 57.1 | 86.5 | 14.0 | 6.0 | 0.380 | 155-134 |
| 63 | 16.0 | 35.0 | M14x1.5 | 42.0 | 50.0 | 9.0 | 65.0 | 34.0 | 70.1 | 100.1 | 16.0 | 6.0 | 0.530 | 155-247 |

*For stainless steel information please contact your sales representative.