



Pneumatic cylinder in plastic according to ISO

- Corrosion-resistant
- Also suitable for aggressive environments
- Lightweight
- Optionally with foodstuffs approval
- Optionally in completely metal-free design

Product variants described in the data sheet may differ from the product presentation and description.

Type description

Single-acting (Type 0045) and double-acting (Type 0044) pneumatic cylinders according to ISO 6432 (Ø 12...25 mm) without end position damping and according to ISO 15552 (Ø 32...50 mm) with end position damping with piston rod nut.

Table of contents

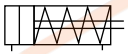

| | |
|--|----------|
| 1. General technical data | 3 |
| 2. Circuit functions | 3 |
| 3. Dimensions | 4 |
| 3.1. DN 12...DN 25 | 4 |
| 3.2. DN 32...DN 50 | 4 |
| 4. Performance specifications | 5 |
| 4.1. Force chart..... | 5 |
| Type 0045 single-acting, without end position cushioning (ISO 6432)..... | 5 |
| Type 0044 double-acting, without end position cushioning (ISO 6432)..... | 5 |
| Type 0044 double-acting, with end position cushioning (ISO 15552)..... | 5 |
| 5. Ordering information | 5 |
| 5.1. Bürkert eShop – Easy ordering and quick delivery..... | 5 |
| 5.2. Bürkert product filter..... | 6 |
| 5.3. Ordering chart cylinders | 6 |
| Type 0045 single-acting, without end position cushioning (ISO 6432)..... | 6 |
| Type 0044 double-acting, without end position cushioning (ISO 6432)..... | 6 |
| Type 0044 double-acting, with end position cushioning (ISO 15552)..... | 7 |
| 5.4. Ordering chart accessories..... | 7 |
| Bearing support | 7 |
| Foot fastener..... | 7 |
| Mounting and piston rod nut set..... | 8 |
| Fork head according to DIN 71 752..... | 8 |
| Fork fastener..... | 8 |
| End support for Fork fastener..... | 8 |

1. General technical data

| Product properties | |
|------------------------------|---|
| Dimensions | Detailed information can be found in chapter "3. Dimensions" on page 4. |
| Material | |
| Cylinder tube | PA6 und PA12, both fibreglass reinforced (optional PP Ø 32...50 mm) |
| Piston rod | Stainless steel 1.4401 |
| Solenoid piston | On request |
| Seal | NBR with PA6 (optional FKM), P5600 with PA12 |
| Performance data | |
| Pressure range | 1...10 bar ¹⁾ |
| Medium data | |
| Operating medium | Lubricated or non-lubricated, filtered compressed air |
| Medium temperature | -20 °C...+70 °C |
| Approvals und Certificates | |
| Approvals | FDA, EU-Directive 2002/72/EG for PA12 |
| Environment and installation | |
| Installation position | As required |
| Ambient temperature | -20 °C...+70 °C |

1.) Measured as overpressure to the atmospheric pressure

2. Circuit functions

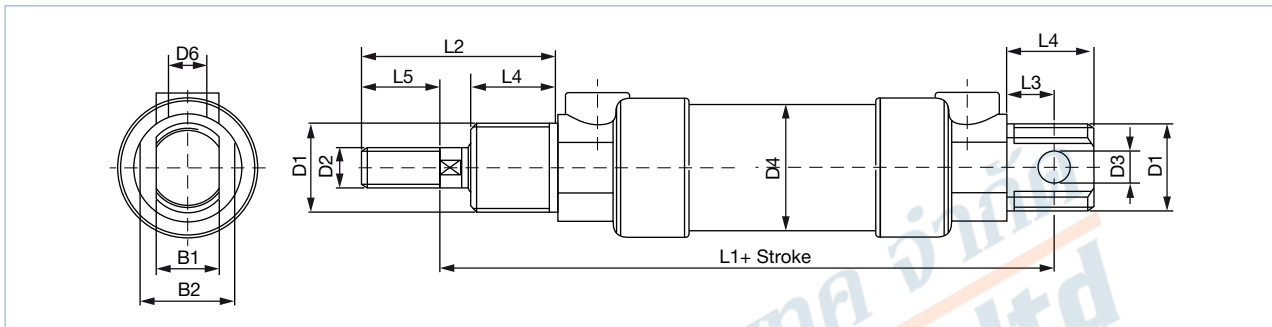
| Circuit function | Description |
|---|-----------------------------|
|  | Single-acting: air - spring |
|  | Double-acting: air - air |

3. Dimensions

3.1. DN 12...DN 25

Note:

- Dimensions in mm
- Cylinder with piston diameter 12...25 according to ISO 6432 (CETOP) Rp 52 P

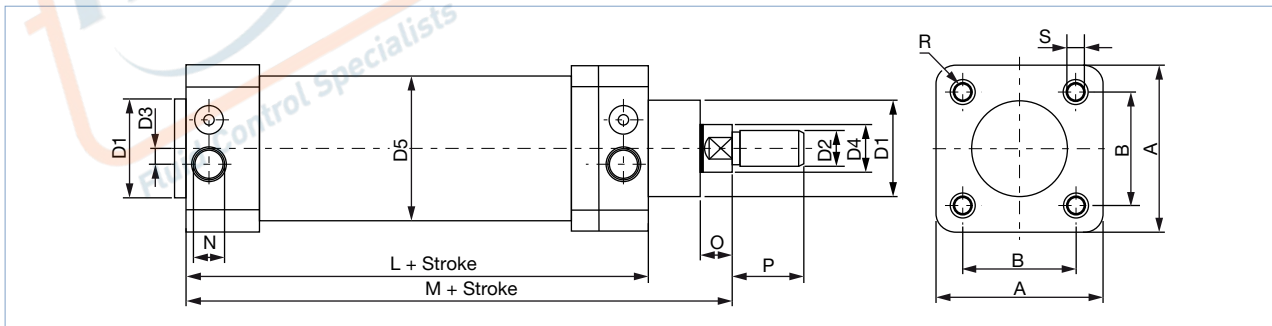


| Piston diameter [mm] | D1 | D2 | D3 | D4 | D6 | L1 | L2 | L3 | L4 | L5 | B1 | B2 |
|----------------------|---------|----------|----|----|-------|-----|----|----|----|----|----|----|
| 12 | M16×1.5 | M6 | 6 | 18 | M5 | 75 | 38 | 9 | 17 | 15 | 12 | 17 |
| 16 | M16×1.5 | M6 | 6 | 22 | M5 | 82 | 38 | 9 | 17 | 15 | 12 | 17 |
| 20 | M22×1.5 | M8 | 8 | 26 | G 1/8 | 95 | 44 | 12 | 20 | 18 | 16 | 22 |
| 25 | M22×1.5 | M10×1.25 | 8 | 31 | G 1/8 | 104 | 50 | 12 | 22 | 20 | 16 | 24 |

3.2. DN 32...DN 50

Note:

- Dimensions in mm
- Cylinder with piston diameter 32...50 mm according to ISO 6431



| Piston diameter [mm] | D1 | D2 | D3 | D4 | D5 | L | M | N | O | P | A | B | R | S |
|----------------------|----|----------|-----|----|----|-----|-----|-------|----|----|----|------|-----|----|
| 32 | 30 | M10×1.25 | 4.5 | 12 | 40 | 94 | 120 | G 1/8 | 9 | 22 | 47 | 32.5 | 5.5 | M5 |
| 40 | 34 | M12×1.25 | 6 | 16 | 48 | 105 | 135 | G 1/4 | 11 | 24 | 57 | 38 | 6.5 | M6 |
| 50 | 40 | M16×1.5 | 6 | 20 | 58 | 106 | 143 | G 1/4 | 13 | 32 | 68 | 46.5 | 9 | M8 |

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4. Performance specifications

4.1. Force chart

Type 0045 single-acting, without end position cushioning (ISO 6432)

| Piston diameter [mm] | Extension force at operating pressure | | | | | Min. retraction force ¹⁾ | |
|-------------------------|---------------------------------------|--------------|--------------|--------------|---------------|-------------------------------------|------------------------|
| | 2 bar [N] | 4 bar [N] | 6 bar [N] | 8 bar [N] | 10 bar [N] | Stroke 25 mm [N] | Stroke 50 mm [N] |
| 12 | 7 | 24.5 | 46.5 | 69.5 | 92.5 | 8.5 | 6.5 |
| 16 | 13 | 53 | 93 | 133 | 173 | 10 | 7 |
| 20 | 24 | 87 | 150 | 213 | 276 | 13.5 | 10 |
| 25 | 43 | 141 | 239 | 337 | 435 | 18 | 15 |

1.) Tensile force at retracted piston rod

Type 0044 double-acting, without end position cushioning (ISO 6432)

| Piston diameter [mm] | Extension force at operating pressure | | | | | Min. retraction force [N] in % of extension force | |
|-------------------------|---------------------------------------|--------------|--------------|--------------|---------------|--|-----|
| | 2 bar [N] | 4 bar [N] | 6 bar [N] | 8 bar [N] | 10 bar [N] | [%] | [N] |
| 12 | 16 | 39 | 61 | 84 | 107 | 75 | |
| 16 | 30 | 70 | 110 | 150 | 190 | 85 | |
| 20 | 46 | 109 | 172 | 235 | 298 | 84 | |
| 25 | 73 | 171 | 269 | 367 | 465 | 84 | |

Type 0044 double-acting, with end position cushioning (ISO 15552)

| Piston diameter [mm] | Extension force at operating pressure | | | | | Min. retraction force [N] in % of extension force | |
|-------------------------|---------------------------------------|--------------|--------------|--------------|---------------|--|-----|
| | 2 bar [N] | 4 bar [N] | 6 bar [N] | 8 bar [N] | 10 bar [N] | [%] | [N] |
| 32 | 145 | 290 | 430 | 580 | 729 | 86 | |
| 40 | 230 | 450 | 680 | 900 | 1130 | 84 | |
| 50 | 350 | 710 | 1060 | 1410 | 1770 | 84 | |

5. Ordering information

5.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

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5.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

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5.3. Ordering chart cylinders

Type 0045 single-acting, without end position cushioning (ISO 6432)

Note:

Further versions on request

| Piston diameter [mm] | Stroke [mm] | Article no. version PA6 | Article no. version PA12 FDA |
|-------------------------|----------------|----------------------------|---------------------------------|
| 012 | 25 | 074440 ☒ | 773171 ☒ |
| | 50 | 074805 ☒ | 773172 ☒ |
| 016 | 25 | 074868 ☒ | 773173 ☒ |
| | 50 | 074642 ☒ | 773174 ☒ |
| 020 | 25 | 074265 ☒ | 773175 ☒ |
| | 50 | 074181 ☒ | 773176 ☒ |
| 025 | 25 | 074580 ☒ | 773177 ☒ |
| | 50 | 074287 ☒ | 773178 ☒ |

Type 0044 double-acting, without end position cushioning (ISO 6432)

Note:

Further versions on request

| Piston diameter [mm] | Stroke [mm] | Article no. version PA6 | Article no. version PA12 FDA |
|-------------------------|----------------|----------------------------|---------------------------------|
| 012 | 25 | 073049 ☒ | 773179 ☒ |
| | 50 | 073211 ☒ | 773180 ☒ |
| | 80 | 072820 ☒ | 773181 ☒ |
| | 100 | 074130 ☒ | 773182 ☒ |
| 016 | 25 | 073204 ☒ | 773183 ☒ |
| | 50 | 072876 ☒ | 773184 ☒ |
| | 80 | 072835 ☒ | 773185 ☒ |
| | 100 | 073084 ☒ | 773186 ☒ |
| 020 | 25 | 072833 ☒ | 773187 ☒ |
| | 50 | 072787 ☒ | 773188 ☒ |
| | 80 | 072905 ☒ | 773189 ☒ |
| | 100 | 072808 ☒ | 773190 ☒ |
| 025 | 25 | 072832 ☒ | 773191 ☒ |
| | 50 | 072829 ☒ | 773192 ☒ |
| | 80 | 072803 ☒ | 773193 ☒ |
| | 100 | 072854 ☒ | 773194 ☒ |

Type 0044 double-acting, with end position cushioning (ISO 15552)

Note:
Further versions on request

| Piston diameter [mm] | Stroke [mm] | Article no. version PA6 | Article no. version PA12 FDA |
|-------------------------|----------------|----------------------------|---------------------------------|
| 032 | 50 | 075748 | 773195 |
| | 100 | 075219 | 773196 |
| | 150 | 075756 | 773197 |
| | 200 | 075220 | 773198 |
| | 300 | 075221 | 773199 |
| 040 | 50 | 075758 | 773200 |
| | 100 | 075222 | 773201 |
| | 150 | 075976 | 773202 |
| | 200 | 075759 | 773203 |
| | 300 | 076228 | 773204 |
| 050 | 50 | 075483 | 773205 |
| | 100 | 075225 | 773206 |
| | 150 | 075382 | 773207 |
| | 200 | 075226 | 773208 |
| | 300 | 773210 | 773209 |

5.4. Ordering chart accessories

Bearing support

Note:
For cylinder DN 12...DN 25, ISO 6432

| Dimensions | Piston Ø | L | A | H | B | b | l | a | d1 | d2 | d6 | Article no. plastic |
|------------|----------|----|----|----|------|----|----|---|-----|----|----|------------------------|
| | 12/16 | 32 | 24 | 24 | 22 | 12 | 20 | 4 | 5.4 | 10 | 6 | 192373 |
| | 20/25 | 42 | 32 | 28 | 30.5 | 16 | 24 | 5 | 6.4 | 11 | 8 | 192374 |

Foot fastener

Note:
Consists of an angle bracket and 2 fastening screws

| Dimensions | Piston Ø | A | B | C | D | G | H | J | R | S | Article no. steel | Article no. stainless steel |
|------------|----------|----|-----|----|----|----|----|----|------|---|----------------------|--------------------------------|
| | 12/16 | 16 | 5.5 | 32 | 40 | 14 | 20 | 20 | 13.4 | 4 | 780754 | 192380 |
| | 20/25 | 22 | 6.6 | 40 | 54 | 17 | 25 | 25 | 18 | 5 | 780755 | 192381 |

Visit product website ▶



Mounting and piston rod nut set

Note:

Each consists of a fastening nut and a piston rod nut

| Dimensions | Piston Ø | Fastening nut | | | Piston rod nut | | | Article no. steel | Article no. stainless steel |
|------------|----------|---------------|----|---|----------------|----|---|-------------------|-----------------------------|
| | | A | B | C | A | B | C | | |
| | 12/16 | M16 x 1.5 | 22 | 5 | M6 | 10 | 3 | 780766 | 192385 |
| | 20 | M22 x 1.5 | 27 | 8 | M8 x 1.25 | 13 | 4 | 780768 | 192386 |
| | 25 | M22 x 1.5 | 27 | 8 | M10 x 1.25 | 17 | 6 | 780769 | 192387 |

Fork head according to DIN 71 752

| Dimensions | Piston Ø | q | r | s | t | u | v | w | Article no. steel | Article no. stainless steel |
|------------|----------|----|----|----|----|----|----|------------|-------------------|-----------------------------|
| | 12/16 | 12 | 6 | 6 | 31 | 24 | 12 | M6 | 192360 | 192361 |
| | 20 | 16 | 8 | 8 | 42 | 32 | 16 | M8 | 192360 | 192363 |
| | 25/32 | 20 | 10 | 10 | 52 | 40 | 20 | M10 x 1.25 | 192364 | 192365 |
| | 40 | 24 | 12 | 12 | 62 | 48 | 24 | M12 x 1.25 | 192366 | 192367 |
| | 50 | 32 | 16 | 16 | 83 | 64 | 32 | M16 x 1.5 | 192368 | 192369 |

Fork fastener

| Dimensions | Piston Ø | F | J | K | R | V | W | Article no. cast aluminium |
|------------|----------|----|----|----|----|----|----|----------------------------|
| | 32 | 22 | 10 | 26 | 45 | 15 | 46 | 192370 |
| | 40 | 25 | 12 | 28 | 52 | 17 | 56 | 192371 |
| | 50 | 27 | 12 | 32 | 60 | 17 | 66 | 192372 |

End support for Fork fastener

| Dimensions | Piston Ø | S H1 | T±0.2 | U±0.15 | V±0.1 | W | XH13 | Y | Article no. cast aluminium |
|------------|----------|------|-------|--------|-------|----|------|----|----------------------------|
| | 32 | 10 | 30 | 32.5 | 25.8 | 45 | 5.5 | 11 | 192375 |
| | 40 | 12 | 36 | 38 | 27.8 | 56 | 6.6 | 14 | 192376 |
| | 50 | 12 | 45 | 46.5 | 31.8 | 66 | 9 | 18 | 192377 |

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