

PRA/802000/M, RA/802000/M, RA/8000, RA/8000/M ISOLine™ 15552 cylinder, double acting



- > ø 32 ... 320 mm
- > High performance adaptive cushioning system "ACS"
- > Low temperature version up to -40 °C
- > High temperature version up to +150 °C
- > 16 bar version available
- > Rail Cylinder Shock and vibration tested to EN 61373 Category 1; Class A + B



Technical features

Medium:

Compressed air, filtered, lubricated or non-lubricated

Standard:

ISO 15552

Operation:

Double acting, adjustable cushioning

Operating pressure:

ø 32 ... 125 mm (Profile barrel)
1 ... 12 bar (14 ... 174 psi)
ø 32 ... 200 mm (Round barrel)
1 ... 16 bar (14 ... 232 psi)
ø 250 & 320 mm (Round barrel)
1 ... 10 bar (14 ... 145 psi)

Ports:

G1/8 ... 1

Cylinder diameters:

32, 40, 50, 63, 80, 100, 125, 160, 200, 250, 320 mm

Standard strokes:

25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500 mm

Non-standard strokes:

ø 32 ... 125 mm (5 ... 2800 mm)
ø 160 ... 320 mm (5 ... 2600 mm)

Operating temperature:

ø 32 ... 125 mm
"Standard version"
-20 ... +80 °C (-4 ... +176 °F)
ø 160 ... 320 mm
"Standard version"
-10 ... +80 °C (+14 ... +176 °F)
ø 32 ... 320 mm
"High temperature version" (T)
0 ... +150 °C (-17,7 ... +302 °F)
ø 32 ... 200 mm
"Low temperature version" (L)
-40 max. ... +80 °C (-40 ... +176 °F)
Air supply must be dry enough to avoid ice formation at temperatures below +2 °C (+35 °F)





Standard Materials:

Barrel: Anodised aluminium
End covers: Pressure diecast aluminium (ø 200 ... 320 mm gravity cast aluminium)
Piston rod: Stainless steel (martensitic)
Piston rod seals: PUR (ø 160 ... 320 mm NBR)
Piston seals: PUR (ø 160 ... 320 mm NBR)
'O'-rings: NBR

Technical data




| Cylinder ø (mm) | 32 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 320 |
|--|----------|----------|---------|---------|---------|---------|-------|-------|-------|-------|-------|
| Profile barrel | • | • | • | • | • | • | • | | | | |
| Round barrel | • | • | • | • | • | • | • | • | • | • | • |
| Port size | G1/8 | G1/4 | G1/4 | G3/8 | G3/8 | G1/2 | G1/2 | G3/4 | G3/4 | G1 | G1 |
| Piston rod ø (mm) | 12 | 16 | 20 | 20 | 25 | 25 | 32 | 40 | 40 | 50 | 63 |
| Piston rod thread | M10x1,25 | M12x1,25 | M16x1,5 | M16x1,5 | M20x1,5 | M20x1,5 | M27x2 | M36x2 | M36x2 | M42x2 | M48x2 |
| Cushion length (mm) | 20 | 22 | 24 | 24 | 26 | 33 | 39 | 43 | 43 | 55 | 60 |
| Cushioning Adaptive cushioning systems "ACS" | • | • | • | • | • | • | • | | | | |
| Cushioning (adjustable cushion) | | | | | | | | • | • | • | • |
| Initial cushion volume (cm3) | 12,8 | 20,2 | 36 | 64 | 111 | 235 | 427 | 784 | 1273 | 2534 | 4559 |
| Theoretical thrusts at 6 bar outstroke (N) | 482 | 754 | 1178 | 1870 | 3016 | 4710 | 7363 | 12064 | 18840 | 29436 | 48228 |
| Theoretical thrusts at 6 bar instroke (N) | 414 | 633 | 990 | 1680 | 2722 | 4416 | 6882 | 11310 | 18090 | 28236 | 47292 |
| Air consumption at 6 bar outstroke (l/cm) | 0,056 | 0,088 | 0,137 | 0,218 | 0,35 | 0,55 | 0,86 | 1,41 | 2,2 | 3,44 | 5,63 |
| Air consumption at 6 bar instroke (l/cm) | 0,048 | 0,074 | 0,114 | 0,195 | 0,32 | 0,51 | 0,79 | 1,32 | 2,1 | 3,3 | 5,41 |

Guide blocks

| | Guide blocks - plain bearings | Guide blocks - roller bearings | Guide blocks - plain bearings, long coupling | Guide blocks - plain bearings, short coupling |
|-----------|---|---|--|---|
| |  |  |  |  |
| 19 | Page 21 | 19 | Page 24 | 19 |
| 32 | QA/8032/51/* | QA/8032/61/* | QA/8032/81/* | QA/8032/85/* |
| 40 | QA/8040/51/* | QA/8040/61/* | QA/8040/81/* | QA/8040/85/* |
| 50 | QA/8050/51/* | QA/8050/61/* | QA/8050/81/* | QA/8050/85/* |
| 63 | QA/8063/51/* | QA/8063/61/* | QA/8063/81/* | QA/8063/85/* |
| 80 | QA/8080/51/* | QA/8080/61/* | QA/8080/81/* | QA/8080/85/* |
| 100 | QA/8100/51/* | QA/8100/61/* | QA/8100/81/* | QA/8100/85/* |








*) Insert standard stroke length: 50, 100, 160, 200, 250, 320, 400 and 500 mm, use the next bigger standard stroke.

Accessories for Profile (ø 32 ... 125 mm) & Round barrel (ø 32 ... 320 mm)

| Model Profile barrel | Model Round barrel | ø | Port size | Banjo flow control | Straight fitting | Elbow fitting |
|----------------------|--------------------|-----|-----------|---|---|--|
| | | | |  |  |  |
| PRA/802032/M/* | RA/802032/M/* | 32 | G1/8 | COK510618 | C02250618 | C02470618 |
| PRA/802040/M/* | RA/802040/M/* | 40 | G1/4 | COK510628 | C02250628 | C02470628 |
| PRA/802050/M/* | RA/802050/M/* | 50 | G1/4 | COK510828 | C02250828 | C02470828 |
| PRA/802063/M/* | RA/802063/M/* | 63 | G3/8 | COK510838 | C02250838 | C02470838 |
| PRA/802080/M/* | RA/802080/M/* | 80 | G3/8 | COK511038 | C02251038 | C02471038 |
| PRA/802100/M/* | RA/802100/M/* | 100 | G1/2 | COK511248 | C02251248 | C02471248 |
| PRA/802125/M/* | RA/802125/M/* | 125 | G1/2 | COK511248 | C02251248 | C02471248 |
| - | RA/8160/M/* | 160 | G3/4 | M840 (Inline) | - | - |
| - | RA/8200/M/* | 200 | G3/4 | M840 (Inline) | - | - |
| - | RA/8250/M/* | 250 | G1 | M855 (Inline) | - | - |
| - | RA/8320/M/* | 320 | G1 | M855 (Inline) | - | - |

For alternative fitting types please contact the technical service.

Magnetically operated switches

| | M/50/** | Groove cover | Switch mounting brackets for M/50 | TQM/31, QM/32, QM/132 | Switch mounting brackets for TQM/31, QM/32, QM/132 | QM/140 | Switch mounting brackets for QM/140 |
|-----------|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| 23 | Page 26 ... 29 | Page 20 | Page 27 | Page 30 | Page 31 | Page 32 | Page 33 |
| 32 | | M/P72725/1000 | QM/27/2/1 | | QM/31/032/22 | | QM/140/010/22 |
| 40 | | M/P72725/1000 | QM/27/2/1 | | QM/31/032/22 | | QM/140/010/22 |
| 50 | | M/P72725/1000 | QM/27/2/1 | | QM/31/032/22 | | QM/140/010/22 |
| 63 | | M/P72725/1000 | QM/27/2/1 | | QM/31/032/22 | | QM/140/010/22 |
| 80 | | M/P72725/1000 | QM/27/2/1 | | QM/31/080/22 | | QM/140/010/22 |
| 100 | | M/P72725/1000 | QM/27/2/1 | | QM/31/080/22 | | QM/140/010/22 |
| 125 | | M/P72725/1000 | QM/27/2/1 | | QM/31/080/22 | | - |
| 160 | | - | QM/27/2/1 | | QM/31/160/22 | | - |
| 200 | | - | QM/27/2/1 | | QM/31/160/22 | | - |
| 250 | | - | QM/27/2/2 | | QM/31/250/22 | | - |
| 320 | | - | QM/27/2/3 | | QM/31/320/22 | | - |

| ø | A -0,5 | ø B d11 | ø BA d11 | BG min | BH | E | EE | G | KK | KV | KW | L2 | L3 | L7 | L8 | L12 | ø MM h9 | PL | TG |
|-----|--------|------------|-------------|-----------|----|-------|------|------|----------|----|------|------|----|-----|-----|-----|------------|------|------|
| 32 | 22 | 30 | 30 | 16 | 6 | 47 | G1/8 | 29 | M10x1,25 | 17 | 5 | 19,5 | 4 | 6,6 | 94 | 5,5 | 12 | 15 | 32,5 |
| 40 | 24 | 35 | 35 | 16 | 6 | 53 | G1/4 | 34,5 | M12x1,25 | 19 | 6 | 22 | 4 | 5,6 | 105 | 6,5 | 16 | 21,5 | 38 |
| 50 | 32 | 40 | 40 | 16 | 8 | 65 | G1/4 | 33 | M16x1,5 | 24 | 8 | 25 | 5 | 1,6 | 106 | 8 | 20 | 22,7 | 46,5 |
| 63 | 32 | 45 | 45 | 16 | 8 | 75 | G3/8 | 36,5 | M16x1,5 | 24 | 8 | 25 | 5 | 3,6 | 121 | 8 | 20 | 24,2 | 56,5 |
| 80 | 40 | 45 | 45 | 17 | 19 | 95 | G3/8 | 42 | M20x1,5 | 30 | 10 | 33 | - | 1,8 | 128 | 10 | 25 | 29,7 | 72 |
| 100 | 40 | 55 | 55 | 17 | 19 | 113 | G1/2 | 42 | M20x1,5 | 30 | 10 | 35 | - | 3,8 | 138 | 10 | 25 | 27,7 | 89 |
| 125 | 54 | 60 | 60 | 20 | 24 | 140 | G1/2 | 54 | M27x2 | 41 | 13,5 | 44 | - | 1,8 | 160 | 13 | 32 | 39,7 | 110 |
| 160 | 72 | 65 | 65 | 28,5 | 32 | 183,5 | G3/4 | 50 | M36x2 | 55 | 18 | 58 | - | 10 | 180 | 16 | 40 | 25 | 140 |
| 200 | 72 | 75 | 75 | 28,5 | 32 | 224 | G3/4 | 50 | M36x2 | 55 | 18 | 67 | - | 10 | 180 | 16 | 40 | 26 | 175 |
| 250 | 84 | 90 | 90 | 35 | 36 | 280 | G1 | 58 | M42x2 | 65 | 21 | 80 | - | 4,5 | 200 | 20 | 50 | 28 | 220 |
| 320 | 96 | 110 | 110 | 30 | 46 | 350 | G1 | 60 | M48x2 | 75 | 24 | 90 | - | 4,5 | 220 | 24 | 63 | 31 | 270 |

| ø | RT | SW | U1 | U2 | VA | VD | WH | ZJ | Model Profile barrel | at 0 mm | per 25 mm | Model Round barrel | at 0 mm | per 25 mm |
|-----|-----|----|-----|------|-----|----|-----|-----|-------------------------|------------|--------------|-----------------------|------------|--------------|
| 32 | M6 | 10 | 4,6 | 6,3 | 3,5 | 6 | 26 | 120 | PRA/802032/M/* | 0,49 (kg) | 0,06 (kg) | RA/802032/M/* | 0,46 (kg) | 0,06 (kg) |
| 40 | M6 | 13 | 5,8 | 9,2 | 3,5 | 6 | 30 | 135 | PRA/802040/M/* | 0,69 (kg) | 0,08 (kg) | RA/802040/M/* | 0,65 (kg) | 0,08 (kg) |
| 50 | M8 | 17 | 8,7 | 10,8 | 3,5 | 6 | 37 | 143 | PRA/802050/M/* | 1,09 (kg) | 0,12 (kg) | RA/802050/M/* | 1,02 (kg) | 0,12 (kg) |
| 63 | M8 | 17 | 10 | 12,8 | 3,5 | 6 | 37 | 158 | PRA/802063/M/* | 1,54 (kg) | 0,13 (kg) | RA/802063/M/* | 1,46 (kg) | 0,14 (kg) |
| 80 | M10 | 22 | 12 | 14,5 | 3,5 | 6 | 46 | 174 | PRA/802080/M/* | 2,64 (kg) | 0,20 (kg) | RA/802080/M/* | 2,54 (kg) | 0,21 (kg) |
| 100 | M10 | 22 | 9 | 14,5 | 3,5 | 6 | 51 | 189 | PRA/802100/M/* | 3,66 (kg) | 0,23 (kg) | RA/802100/M/* | 3,50 (kg) | 0,23 (kg) |
| 125 | M12 | 27 | 12 | 17 | 5,5 | 8 | 65 | 225 | PRA/802125/M/* | 6,16 (kg) | 0,45 (kg) | RA/802125/M/* | 5,92 (kg) | 0,34 (kg) |
| 160 | M16 | 36 | 19 | 16 | 4 | 15 | 80 | 260 | - | - | - | RA/8160/M/* | 14,9 (kg) | 0,55 (kg) |
| 200 | M16 | 36 | 19 | 16 | 5 | 15 | 95 | 275 | - | - | - | RA/8200/M/* | 21,7 (kg) | 0,60 (kg) |
| 250 | M20 | 41 | 22 | 30 | 7 | 13 | 105 | 305 | - | - | - | RA/8250/M/* | 32,6 (kg) | 0,92 (kg) |
| 320 | M24 | 55 | 22 | 30 | 7 | 13 | 120 | 340 | - | - | - | RA/8320/M/* | 59,8 (kg) | 1,46 (kg) |

* Please insert stroke length.

Basic Dimension are also for cylinder variants or for different piston rod material

LPRA/802000/M, LRA/802000/M, LRA/8000/M - Low Temperature Cylinder

TPRA/802000/M, TRA/802000/M, TRA/8000/M - High Temperature Cylinder

HPRA/802000/M, HRA/802000/M, - Hydraulic Cylinder

PRA/802000/W2, RA/802000/W2 - Cylinder with Special Wiper - Seal

PRA/802000/X2, RA/802000/X2, RA/8000/X2 - Low Friction Cylinder

PRA/802000/MU, RA/802000/MU, RA/8000/MU - Cylinder with Extended Piston Rod

PRA/802000/W6, RA/802000/W6 - Cylinder with Extended Piston Rod and Special Wiper - Seal

PRA/802000/MW, RA/802000/MW, RA/8000/MW - Cylinder without Cushioning

PRA/802000/X4, RA/802000/X4, RA/8000/X4 - Low Friction Cylinder without Cushioning

RA/8000/W1 - Cylinder with Special Wiper - Seal without Magnet

RA/8000/X1 - Low Friction Cylinder without Magnet

RA/8000/IU - Cylinder with Extended Piston Rod without Magnet

RA/8000/W5 - Cylinder with Extended Piston Rod and Special Wiper - Seal without Magnet

RA/8000/W - Cylinder without Cushioning without Magnet

RA/8000/X3 - Low Friction Cylinder without Cushioning without Magnet