# PROFILED/TIE RODS CYLINDERS

**Ø 32 to 200 mm** - double acting
ISO 15552-AFNOR-DIN
**with piston rod protection boot**

Series **450-453**
Type PES

B

## FEATURES

- *PES cylinder equipped with protective boot of NBR (nitrile)*

## GENERAL

| | |
|---|---|
| **Detection** | **Equipped for magnetic position detectors** |
| **Fluid** | Air or neutral gas, filtered, lubricated or not |
| **Operating pressure** | 10 bar max. |
| **Ambient temperature** | -20°C to +70°C |
| **Cushioning** | Pneumatic, adjustable from both sides with captive screws |
| **Standards** | ISO 15552-AFNOR NF ISO 15552-DIN ISO 15552 |
| **Maximum stroke** | |

| Ø (mm) | **max. stroke** (mm) | |
|---|---|---|
| | **profiled barrel** | **tie rods** |
| 32 | 250 | 250 |
| 40 | 500 | 500 |
| 50 | 750 | 750 |
| 63-100 | 1000 | 1000 |
| 125-200 | - | 1000 |

## CONSTRUCTION

| | |
|---|---|
| **Boot** | NBR (nitrile) |
| **Retaining ring** | Light alloy and POM (polyacetal) |
| **Other parts** | Same as standard PES cylinders |

The following versions and mountings do not fit and cannot be adapted for this specialized cylinder:

- Hinge
- Anti-rotation piston rod
- High temperature version
- Rod lock
- Oversize rod

## SPECIFICATIONS

To order, please specify:

- Catalogue number or part number of standard PES cylinder
- Rod boot option catalogue number:

| | Ø (mm) | **32** (1) | **40** | **50** | **63** | **80** | **100** | **125** | **160** | **200** |
|---|---|---|---|---|---|---|---|---|---|---|
| **catalogue number** | single rod | **911503** | **911504** | **911505** | **911506** | **911507** | **911508** | **911509** | **911510** | **911511** |
| | through rod | **911512** | **911513** | **911514** | **911515** | **911516** | **911517** | **911518** | **911519** | **911520** |

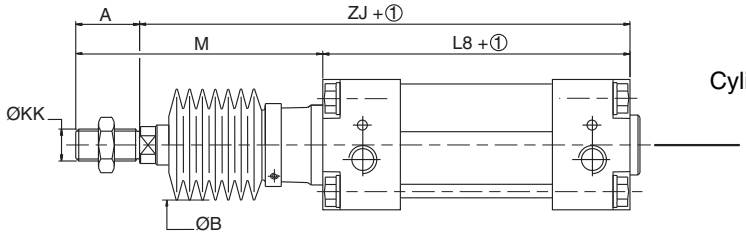
(1) In the case of use of a BIM magnetic detector on PES series 450 **Ø 32**, it is necessary to add the option code = **995125**

**The magnetic position detectors are ordered separately:**
- "T" model (see page P291), "COMPACT" model (see page P293), reed switch or magneto-resistive type)

**MOUNTINGS**: Fastener codes and quantities (see page P242 and remarks below)
The front flange or top brackets are supplied installed on the cylinder

## DIMENSIONS (mm)

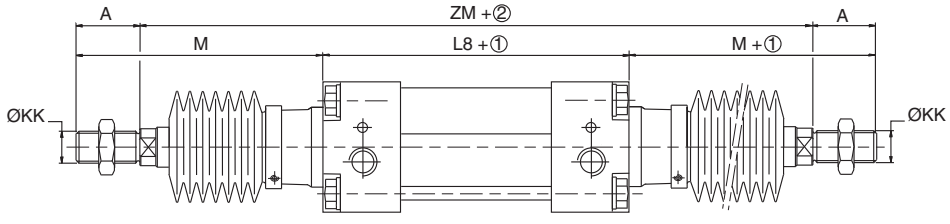
**Cylinder single rod**




Cylinder with **profiled barrel**
Ø 32 to 100 mm

Cylinder with **tie rods**
Ø 32 to 200 mm

**Cylinder with through rod**




① Stroke
② 2 x stroke

| Ø (mm) | A | ØB | ØKK | L8 | **M as a function of stroke:** (mm) | | | | | | **ZJ as a function of stroke:** (mm) | | | | | | **ZM as a function of stroke:** (mm) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **0-75** | **76-150** | **151-250** | **251-500** | **501-750** | **751-1000** | **0-75** | **76-150** | **151-250** | **251-500** | **501-750** | **751-1000** | **0-75** | **76-150** | **151-250** | **251-500** | **501-750** | **751-1000** |
| **32** | 22 | 41 | M10x1,25 | 94 | 81 | 107 | 127 | - | - | - | 153 | 179 | 199 | - | - | - | 212 | 264 | 304 | - | - | - |
| **40** | 24 | 41 | M12x1,25 | 105 | 138 | 138 | 138 | 218 | - | - | 219 | 219 | 219 | 299 | - | - | 333 | 333 | 333 | 493 | - | - |
| **50** | 32 | 60 | M16x1,5 | 106 | 153 | 153 | 153 | 233 | 313 | - | 227 | 227 | 227 | 307 | 387 | - | 348 | 348 | 348 | 508 | 668 | - |
| **63** | 32 | 60 | M16x1,5 | 121 | 153 | 153 | 153 | 233 | 313 | 394 | 242 | 242 | 242 | 322 | 402 | 483 | 363 | 363 | 363 | 523 | 683 | 845 |
| **80** | 40 | 60 | M20x1,5 | 128 | 170 | 170 | 170 | 250 | 330 | 411 | 258 | 258 | 258 | 338 | 418 | 499 | 388 | 388 | 388 | 548 | 708 | 870 |
| **100** | 40 | 60 | M20x1,5 | 138 | 160 | 160 | 160 | 220 | 280 | 340 | 258 | 258 | 258 | 318 | 378 | 438 | 378 | 378 | 378 | 498 | 618 | 738 |
| **125** | 54 | 88 | M27x2 | 160 | 188 | 188 | 188 | 248 | 308 | 368 | 294 | 294 | 294 | 354 | 414 | 474 | 428 | 428 | 428 | 548 | 668 | 788 |
| **160** | 72 | 88 | M36x2 | 180 | 222 | 222 | 222 | 266 | 311 | 386 | 330 | 330 | 330 | 374 | 419 | 494 | 480 | 480 | 480 | 568 | 658 | 808 |
| **200** | 72 | 88 | M36x2 | 180 | 237 | 237 | 237 | 281 | 326 | 401 | 345 | 345 | 345 | 389 | 434 | 509 | 510 | 510 | 510 | 598 | 688 | 838 |

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