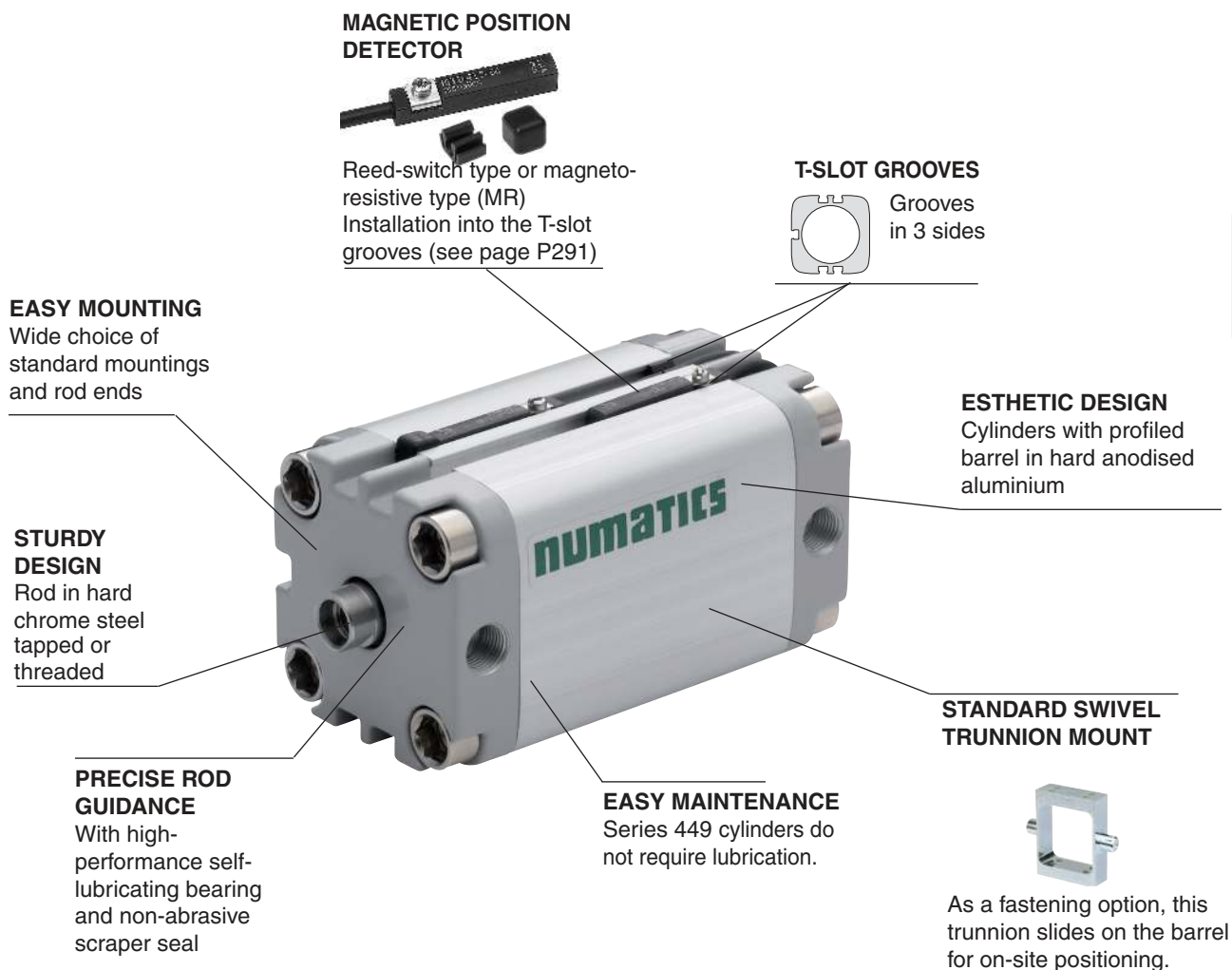
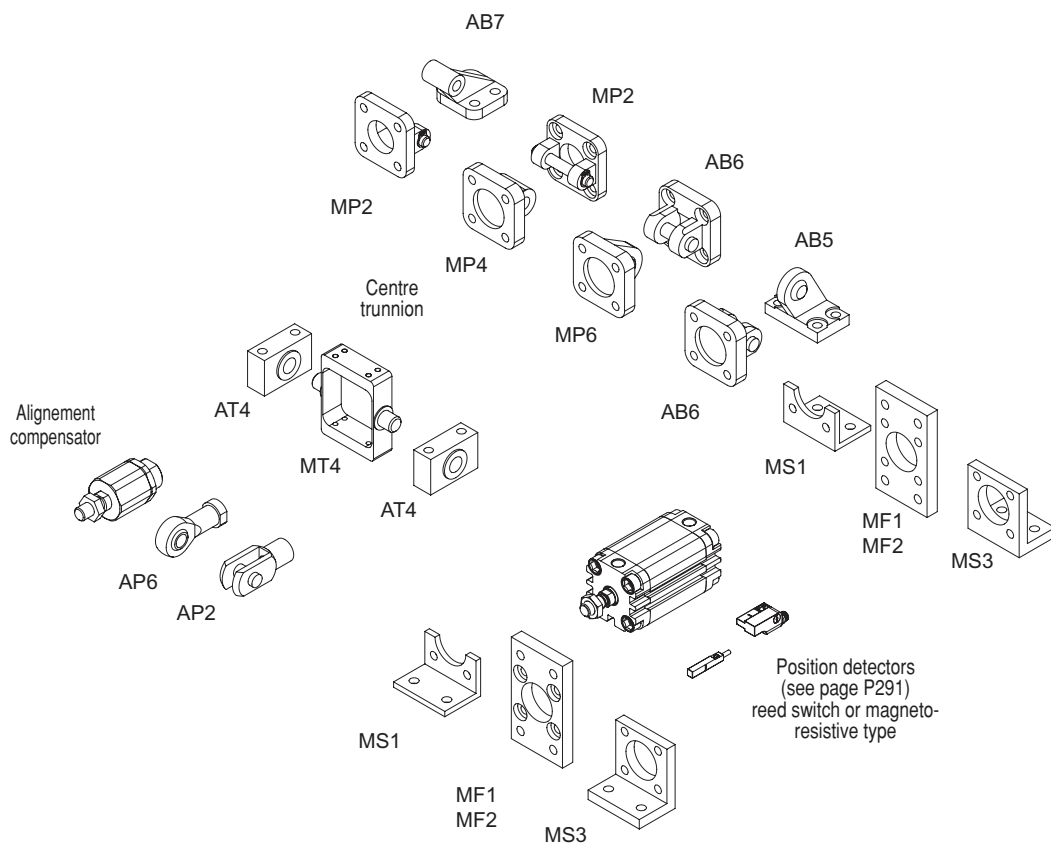
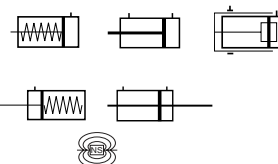




### STANDARD MOUNTINGS (see page P235)





## GENERAL

### Detection

### Fluid

### Operating pressure

### Ambient temperature

### Max. speed rate

### Standards

### Equipped for magnetic position detectors

Air or inert gas, filtered, lubricated or not

10 bar, max. [1 bar = 100 kPa]

-20°C to +70°C (for higher temperature, see HTP option)

0,5 m/s

449 series comply with ISO 21287

Diameters 32-100 are also compatible with ISO 15552

(distances between the centres of the mounting holes)

### Minimum pressure to compress the spring (single acting version)

Ø20-50 = 1 bar

Ø63-100 = 0,65 bar

The return of the piston rod must be without load (single acting version)

## CONSTRUCTION

|                                         |                                                 |
|-----------------------------------------|-------------------------------------------------|
| <b>Barrel</b>                           | Hard anodized aluminium alloy                   |
| <b>Front and rear ends</b>              | Aluminium alloy                                 |
| <b>Bearing</b>                          | Self-lubricating metal                          |
| <b>Rod</b>                              | Ø 20-25: stainless steel                        |
|                                         | Ø 32-100: Hard chrome plated steel              |
| <b>Rod end</b>                          | Tapped or threaded                              |
| <b>Piston</b>                           | POM (polyacetal) or light alloy                 |
| <b>Piston seals</b>                     | PUR (polyurethane)                              |
| <b>Version with antirotation device</b> | <b>Load carrying plate</b> Aluminium alloy      |
|                                         | <b>Guide rod</b> Ø 20-25: stainless steel       |
|                                         | Ø 32-100: Hard chrome plated steel              |
|                                         | <b>Bearing guide rod</b> Self-lubricating metal |



2D/3D CAD models - **In 3D**

### 15-DIGIT PRODUCT CODE

**G 449 A - S K - - - A00**

### Thread connection

G = ISO 16030

### Product series

449

### Revision letter

A = Initial release

### Diameter (mm)

L = 20 <sup>(3)</sup> 5 = 50  
M = 25 <sup>(3)</sup> 6 = 63  
3 = 32 8 = 80  
4 = 40 1 = 100

<sup>(3)</sup> Available in stainless steel rod end only.

### Rod options 1

S = Double acting

1 = Single acting rod in

2 = Through rod

3 = Single acting rod out

4 = Rod antirotation device

### Rod options 2 <sup>(4)</sup>

K = Hard chromed female thread rod end

M = Hard chromed male thread rod end

G = Stainless steel female thread rod end

N = Stainless steel male thread rod end

<sup>(4)</sup> K and M = No use with the 20/25 mm diameters.

Stainless steel male thread rod nuts delivered with Rod option N.

### Options

A00 = Without

MT4 = Non fixed centre trunnion (MT4 axis perpendicular to the ports) <sup>(1) (3)</sup>

MS4 = Non fixed centre trunnion (MT4 axis parallel to the ports) <sup>(1) (3)</sup>

AT1 = ATEX zones 1/21

AT2 = ATEX zones 2/22

HTP = High temperature (up to 120°C) <sup>(2)</sup>

NPC = Anticorrosion treatment on covers & high-quality rod seals

<sup>(1)</sup> For fixed supplied centre trunnion, consult our Dynamic Product Modeling Tool on [www.asconumatics.eu](http://www.asconumatics.eu) and indicate XV dimension.

<sup>(2)</sup> Non equipped for magnetic position detectors

<sup>(3)</sup> Ø32 to 100 mm only.

### Recommended standard strokes (mm) <sup>(5)</sup>

| Ø mm | connect. Ø (G) | 5  | 10 | 15 | 20 | 25 | 50 | 80 | 100 | max. stroke | Rod antirotation device max. stroke |
|------|----------------|----|----|----|----|----|----|----|-----|-------------|-------------------------------------|
| 20   | M5             | SD | SD | SD | D  | D  | D  |    |     | 60          | 60                                  |
| 25   |                | SD | SD | SD | SD | D  | D  |    |     | 60          | 60                                  |
| 32   |                | SD | SD | SD | SD | SD | D  | D  |     | 400         | 100                                 |
| 40   |                | SD | SD | SD | SD | SD | D  | D  | D   | 400         | 100                                 |
| 50   | G1/8           | SD | SD | SD | SD | SD | D  | D  | D   | 400         | 100                                 |
| 60   |                | SD | SD | SD | SD | SD | D  | D  | D   | 400         | 100                                 |
| 80   |                | SD | SD | SD | SD | SD | D  | D  | D   | 400         | 100                                 |
| 100  |                | SD | SD | SD | SD | SD | D  | D  | D   | 400         | 100                                 |

Strokes range available up to "max. stroke" column on the right.

Please note strokes marked in grey exceed the maximum recommended.

<sup>(5)</sup> Other strokes on request. / Min. stroke: 5 mm

D = Double acting only / SD = Single & Double acting

## POSITION DETECTORS

Magnetic position detectors must be ordered separately: modèles "T" (see page P291), reed switch or magneto-resistive type

## MOUNTINGS

Mountings must be ordered separately: see page P235

## INSTALLATION

- For a longer lifetime, it is recommended to use external stoppers

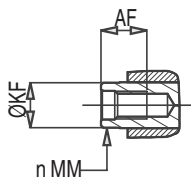
## DIMENSIONS (mm), WEIGHT (kg)



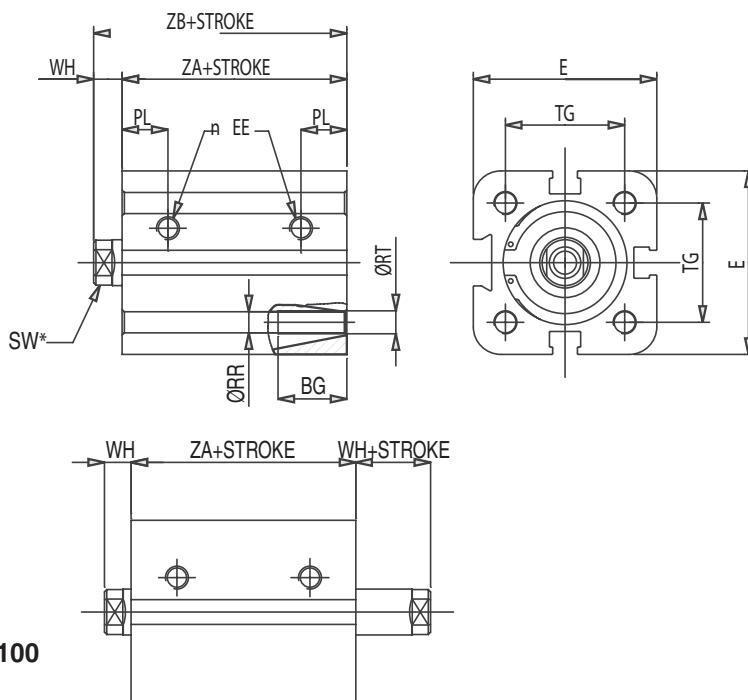
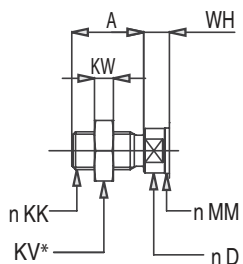
## SINGLE-ROD TYPE CYLINDER Ø 20-25

Bare cylinder  
ISO 21287

## tapped rod end



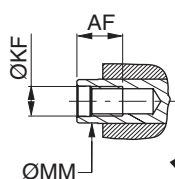
## threaded rod end



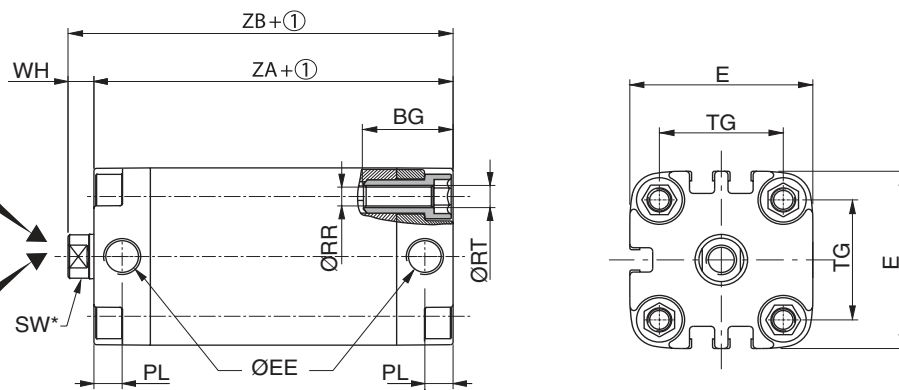
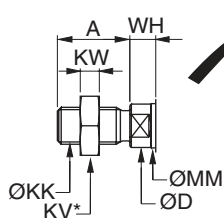
## SINGLE-ROD TYPE CYLINDER Ø 32-100

Bare cylinder  
ISO 21287

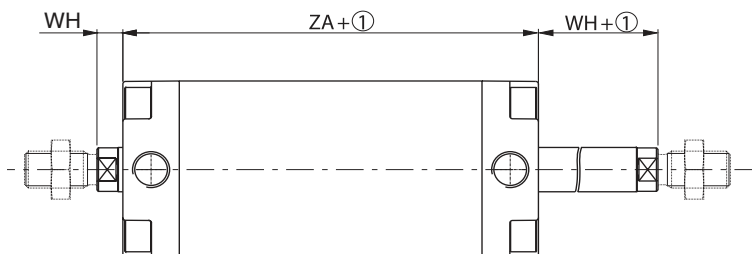
## tapped rod end



## threaded rod end



## THROUGH-ROD TYPE CYLINDER

Bare cylinder  
ISO 21287


① Stroke

\* Width across flats

| Ø   | weight |        |
|-----|--------|--------|
|     | (2)    | (3)    |
| 20  | 0,125  | 0,0026 |
| 25  | 0,15   | 0,003  |
| 32  | 0,228  | 0,0029 |
| 40  | 0,282  | 0,0033 |
| 50  | 0,421  | 0,0048 |
| 63  | 0,553  | 0,0053 |
| 80  | 0,991  | 0,0078 |
| 100 | 1,818  | 0,0099 |

(2) Cylinder weight at 0 mm stroke.

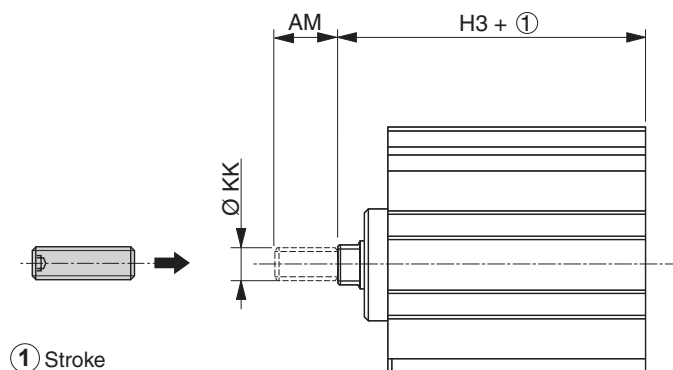
(3) Weight to be added per additional mm length.

| Ø   | A  | AF | BG   | ØD   | E   | EE    | ØKF | ØKK      | KV | KW | ØMM | PL  | ØRR | ØRT | SW | TG   | WH | ZA | ZB |
|-----|----|----|------|------|-----|-------|-----|----------|----|----|-----|-----|-----|-----|----|------|----|----|----|
| 20  | 16 | 10 | 15   | 9,8  | 36  | M5    | M6  | M8x1,25  | 13 | 4  | 10  | 10  | 4,2 | M5  | 8  | 22   | 6  | 37 | 43 |
| 25  | 16 | 10 | 15   | 9,8  | 40  | M5    | M6  | M8x1,25  | 13 | 4  | 10  | 10  | 4,2 | M5  | 8  | 26   | 6  | 39 | 45 |
| 32  | 19 | 12 | 23,5 | 11,8 | 48  | G 1/8 | M8  | M10x1,25 | 16 | 5  | 12  | 7,5 | 5,1 | M6  | 10 | 32,5 | 7  | 44 | 51 |
| 40  | 19 | 12 | 23,5 | 11,8 | 54  | G 1/8 | M8  | M10x1,25 | 16 | 5  | 12  | 7,5 | 5,1 | M6  | 10 | 38   | 7  | 45 | 52 |
| 50  | 22 | 16 | 24   | 15,8 | 66  | G 1/8 | M10 | M12x1,25 | 18 | 6  | 16  | 7,5 | 6,7 | M8  | 13 | 46,5 | 8  | 45 | 53 |
| 63  | 22 | 16 | 24   | 15,8 | 78  | G 1/8 | M10 | M12x1,25 | 18 | 6  | 16  | 7,5 | 6,7 | M8  | 13 | 56,5 | 8  | 49 | 57 |
| 80  | 28 | 20 | 28,5 | 19,8 | 96  | G 1/8 | M12 | M16x1,50 | 24 | 8  | 20  | 8,5 | 8,4 | M10 | 16 | 72   | 10 | 54 | 64 |
| 100 | 28 | 20 | 28,5 | 24,8 | 115 | G 1/8 | M12 | M16x1,50 | 24 | 8  | 25  | 10  | 8,4 | M10 | 21 | 89   | 10 | 67 | 77 |

**DIMENSIONS (mm), WEIGHT (kg)**

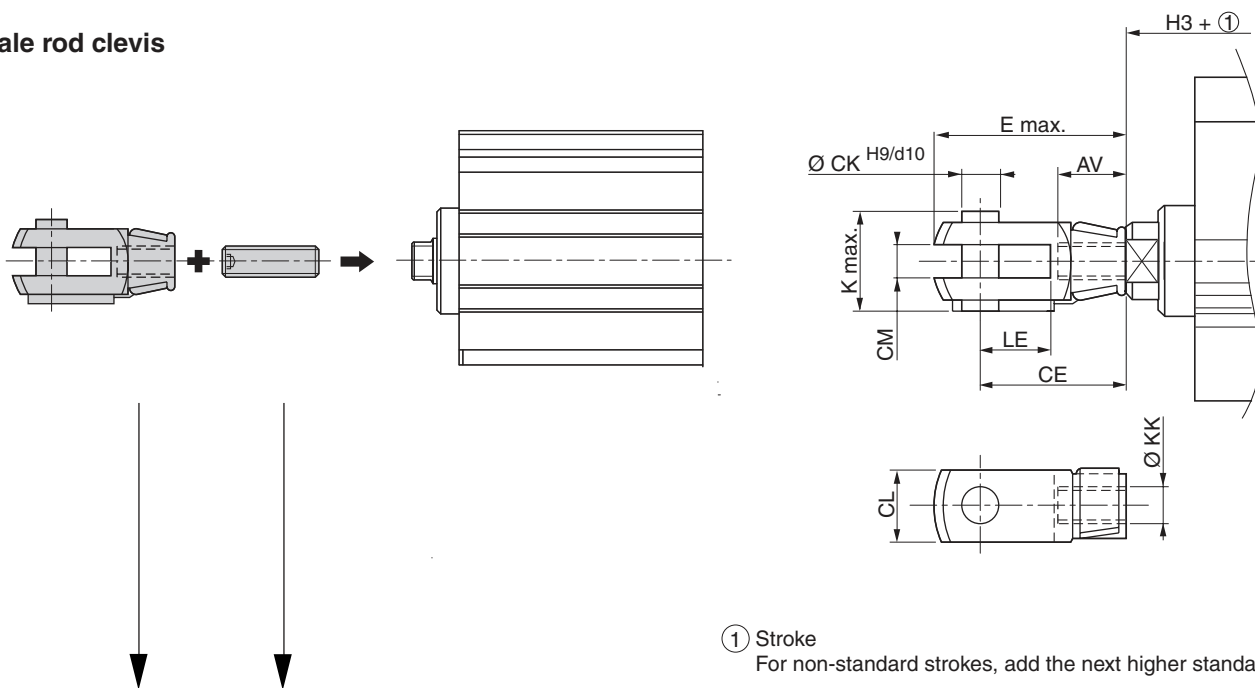
**Threaded end piece**

Threaded rod endfitting for the tapped rod end of standard 16 to 100 mm bore cylinders.



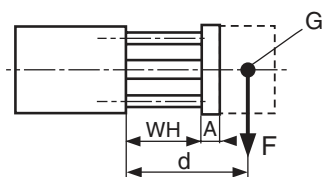
| Ø<br>(mm) | catalogue number<br>threaded end piece | AM  | H3 + | Ø KK |
|-----------|----------------------------------------|-----|------|------|
| 20        | P493A3135000A00                        | 12  | 50,5 | M6   |
| 25        |                                        |     | 52   |      |
| 32        | P493A5135000A00                        | 15  | 53   | M8   |
| 40        |                                        |     | 57,5 |      |
| 50        | P493A8135000A00                        | M10 | 64   | M10  |
| 63        |                                        |     |      |      |
| 80        | P493A1135000A00                        | M12 | 76,5 | M12  |
| 100       |                                        |     |      |      |

In your order, indicate the code of the end piece, which is supplied separately.

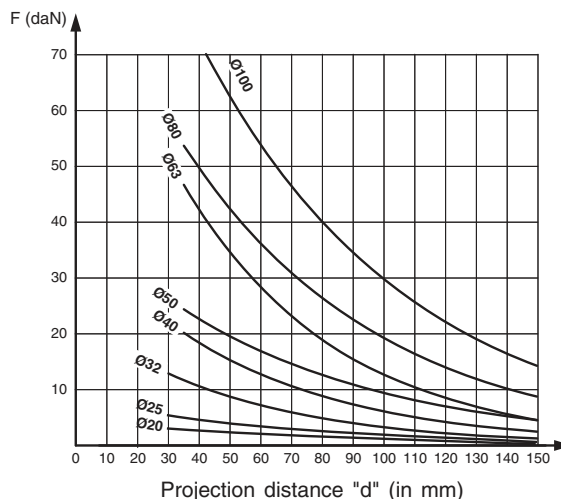
**Female rod clevis**

 ① Stroke  
For non-standard strokes, add the next higher standard one.

| Ø<br>(mm) | catalogue number<br>female end piece | catalogue number<br>threaded end piece | AV | CE | Ø CK | CL | CM                                  | E    | K    | Ø KK | LE | H3   | clevis<br>weight |
|-----------|--------------------------------------|----------------------------------------|----|----|------|----|-------------------------------------|------|------|------|----|------|------------------|
| 20        | P493AJ431000A00                      | P493A3135000A00                        | 12 | 24 | 6    | 12 | 6 <sup>+0,4</sup> <sub>+0,1</sub>   | 33,5 | 16,5 | M6   | 12 | 36,5 | 0,020            |
| 25        |                                      |                                        |    |    |      |    |                                     |      |      |      |    | 44   |                  |
| 32        | P493AL431000A00                      | P493A5135000A00                        | 16 | 32 | 8    | 16 | 6 <sup>+0,4</sup> <sub>+0,1</sub>   | 45   | 22   | M8   | 16 | 53   | 0,050            |
| 40        |                                      |                                        |    |    |      |    |                                     |      |      |      |    | 57,5 |                  |
| 50        | P493A3431000A00                      | P493A8135000A00                        | 20 | 40 | 10   | 20 | 10 <sup>+0,5</sup> <sub>+0,15</sub> | 56   | 26   | M10  | 20 | 64   | 0,100            |
| 63        |                                      |                                        |    |    |      |    |                                     |      |      |      |    |      |                  |
| 80        | P493A4431000A00                      | P493A1135000A00                        | 22 | 48 | 12   | 24 | 10 <sup>+0,5</sup> <sub>+0,15</sub> | 67   | 32   | M12  | 24 | 76,5 | 0,150            |
| 100       |                                      |                                        |    |    |      |    |                                     |      |      |      |    |      |                  |

Please indicate the threaded and clevis end piece code in your order.

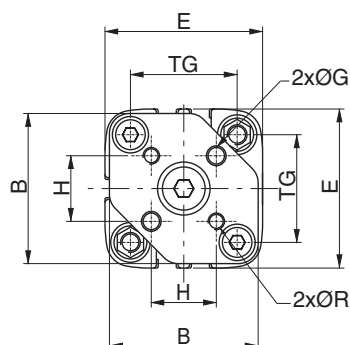
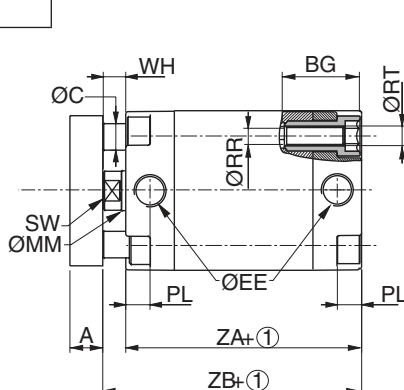
**MAX. ADMISSIBLE LOAD "F" ON THE ROD END**


$d$  = the projection distance (in mm) corresponds to the dimensions  $WH + A$  + the stroke length + the distance from the centre of gravity (G) of the load to the front mating surface of the load carrying plate.


**DIMENSIONS (mm), WEIGHT (kg)**

**CYLINDER WITH ANTIROTATION DEVICE**

Bare cylinder  
ISO 21287



| Ø   | weight |        |
|-----|--------|--------|
|     | (3)    | (4)    |
| 20  | 0,150  | 0,0029 |
| 25  | 0,1901 | 0,0034 |
| 32  | 0,328  | 0,0037 |
| 40  | 0,392  | 0,0041 |
| 50  | 0,601  | 0,0061 |
| 63  | 0,773  | 0,0065 |
| 80  | 1,381  | 0,0096 |
| 100 | 2,348  | 0,0116 |

① Stroke

② Mounting holes (see page P226-3)

(3) Cylinder weight at 0 mm stroke.  
(4) Weight to be added per additional mm length.

| Ø   | A  | B    | BG   | ØC | E   | EE   | ØG | H    | ØMM | PL  | ØR  | ØRT | ØRR | SW | TG   | WH | ZA | ZB |
|-----|----|------|------|----|-----|------|----|------|-----|-----|-----|-----|-----|----|------|----|----|----|
| 20  | 8  | 30,5 | 15   | 5  | 36  | M5   | 4  | 12   | 10  | 10  | M4  | M5  | 4,5 | 8  | 22   | 6  | 37 | 43 |
| 25  | 8  | 36,5 | 15   | 6  | 40  | M5   | 5  | 15,6 | 10  | 10  | M5  | M5  | 4,5 | 8  | 26   | 6  | 39 | 45 |
| 32  | 10 | 45,3 | 23,5 | 8  | 48  | G1/8 | 5  | 19,8 | 12  | 7,5 | M5  | M6  | 5,1 | 10 | 32,5 | 7  | 44 | 51 |
| 40  | 10 | 51   | 23,5 | 8  | 54  | G1/8 | 5  | 23,3 | 12  | 7,5 | M5  | M6  | 5,1 | 10 | 38   | 7  | 45 | 52 |
| 50  | 12 | 62   | 27,5 | 10 | 66  | G1/8 | 6  | 29,7 | 16  | 7,5 | M6  | M8  | 6,7 | 13 | 46,5 | 8  | 45 | 53 |
| 63  | 12 | 73   | 27,5 | 10 | 78  | G1/8 | 6  | 35,4 | 16  | 7,5 | M6  | M8  | 6,7 | 13 | 56,5 | 8  | 49 | 57 |
| 80  | 14 | 91   | 28,5 | 12 | 96  | G1/8 | 8  | 46   | 20  | 8,5 | M8  | M10 | 8,5 | 16 | 72   | 10 | 54 | 64 |
| 100 | 16 | 111  | 28,5 | 12 | 115 | G1/8 | 10 | 56,6 | 25  | 10  | M10 | M10 | 8,5 | 21 | 89   | 10 | 67 | 77 |

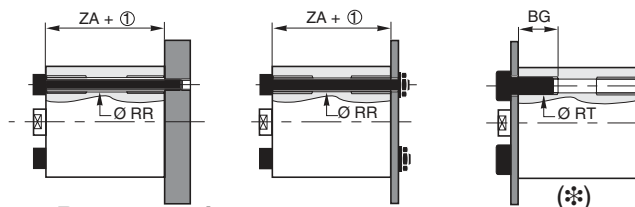
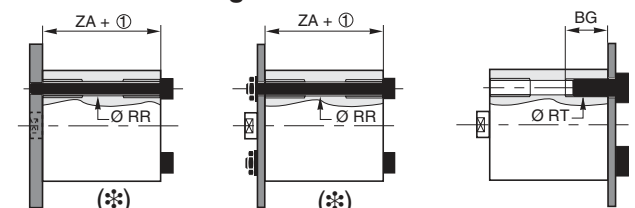
**SPARE PARTS KITS CODE**

| Ø    | 1 + 2 + 3 <sup>(1)</sup> |
|------|--------------------------|
| (mm) |                          |
| 20   | 97802870                 |
| 25   | 97802871                 |
| 32   | 97802872                 |
| 40   | 97802873                 |
| 50   | 97802874                 |
| 63   | 97802875                 |
| 80   | 97802876                 |
| 100  | 97802877                 |

<sup>(1)</sup> For best results, use grease supplied in each kit. Supplementary tube (11 cm<sup>3</sup>) available on request, catalogue number: 97802100

**DIRECT MOUNTING OPTIONS**

The threaded mounting holes and the four unthreaded through holes (ØRR) ensure compatibility with a wide choice of screws and other fasteners recommended for short-stroke cylinders.

**• Front mounting**

**• Rear mounting**


(\*) Type of mounting not suitable with anti-rotation device



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