

# Series 94 and 95 stainless steel mini-cylinders

Single-acting and double-acting, magnetic

Series 94:  $\varnothing$  16, 20, 25 mm

Series 95:  $\varnothing$  25 mm, cushioned

- » In compliance with ISO 6432
- » Clean design
- » Stainless steel AISI 316



The Series 94 and 95 cylinders can be used in critical applications in which a high corrosion resistance is required (for example off-shore, marine, food).

Their construction enables the replacement of all seals. Series 95 is normally equipped with adjustable end-stroke cushioning by means of a screw on the end block. In addition both Series 94 and 95 are equipped with a mechanical cushioning in order to make the impact of the piston less noisy as it reaches the end of the stroke.

## GENERAL DATA

|                              |   |
|------------------------------|---|
| <b>Construction</b>          | end blocks secured to the tube  |
| <b>Operation</b>             | single-acting and double-acting   |
| <b>Design</b>                | ISO 6432  |
| <b>Materials</b>             | end caps, rod and tube in stainless steel AISI 316, seals in NBR, plastic guiding element, NSF H1-certified lubricant   |
| <b>Mounting</b>              | several types of cylinders clamps available   |
| <b>Strokes min - max</b>     | 10 ÷ 500 mm   |
| <b>Operating temperature</b> | 0° - 80°C (with dry air -20°C)  |
| <b>Operating pressure</b>    | 1 ÷ 10 bar  |
| <b>Speed</b>                 | 10 ÷ 1000 mm/sec (without load)   |
| <b>Fluid</b>                 | clean air, without lubrication.<br>If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted. |

### STANDARD STROKES FOR MINICYLINDERS SERIES 94 AND 95

- = single-acting
- ✕ = double-acting

| STANDARD STROKES |    | 10 | 25 | 40 | 50 | 80 | 100 | 125 | 160 | 200 | 250 | 300 | 320 | 400 | 500 |
|------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 94               | 16 | ●✕ | ●✕ | ●✕ | ●✕ | ✕  | ✕   | ✕   | ✕   | ✕   |     |     |     |     |     |
| 94               | 20 | ●✕ | ●✕ | ●✕ | ●✕ | ✕  | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   |     |     |     |
| 94               | 25 | ●✕ | ●✕ | ●✕ | ●✕ | ✕  | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   |
| 95               | 25 | ✕  | ✕  | ✕  | ✕  | ✕  | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   | ✕   |

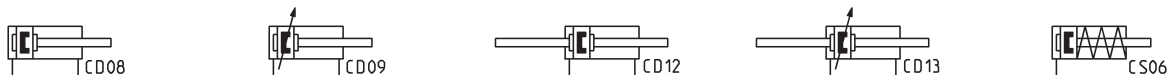
### CODING EXAMPLE

|            |   |          |          |   |          |            |  |
|------------|---|----------|----------|---|----------|------------|--|
| <b>94</b>  | <b>N</b>  | <b>2</b> | <b>A</b> | <b>16</b>   | <b>A</b> | <b>100</b> |  |
| <b>94</b>  | SERIES<br>94 = magnetic<br>95 = magnetic, cushioned   |          |          |   |          |            |  |
| <b>N</b>   | VERSION<br>N = standard   |          |          |   |          |            |  |
| <b>2</b>   | OPERATION<br>1 = single-acting, front spring<br>2 = double-acting<br>3 = double-acting, through-rod |          |          | PNEUMATIC SYMBOLS<br>CS06 (S. 94)<br>CD08 (S. 94) - CD09 (S. 95)<br>CD12 (S. 94) - CD13 (S. 95) |          |            |  |
| <b>A</b>   | MATERIALS<br>A = stainless steel, seals in NBR<br>V = stainless steel, all seals in FKM (150°C)     |          |          |   |          |            |  |
| <b>16</b>  | BORE<br>16 = 16 mm - 20 = 20 mm - 25 = 25 mm  |          |          |   |          |            |  |
| <b>A</b>   | TYPE OF DESIGN<br>A = standard with locking ring for end cap Mod. V and piston rod lock nut Mod. U  |          |          |   |          |            |  |
| <b>100</b> | STROKE (see the table)  |          |          |   |          |            |  |
|            | = standard<br>V = rod seal in FKM   |          |          |   |          |            |  |

SERIES 94 AND 95 STAINLESS STEEL CYLINDERS

### PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



**ACCESSORIES FOR STAINLESS STEEL MINICYLINDERS SERIES 94 AND 95**

SERIES 94- AND 95 STAINLESS STEEL CYLINDERS



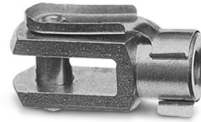
Foot mount Mod. B



Flange bracket Mod. E



Trunnion bracket Mod. I



Rod fork end  
Mod. G-94/90



Swivel ball joint  
Mod. GA-94/90



Piston rod lock nut  
Mod. U-94/90



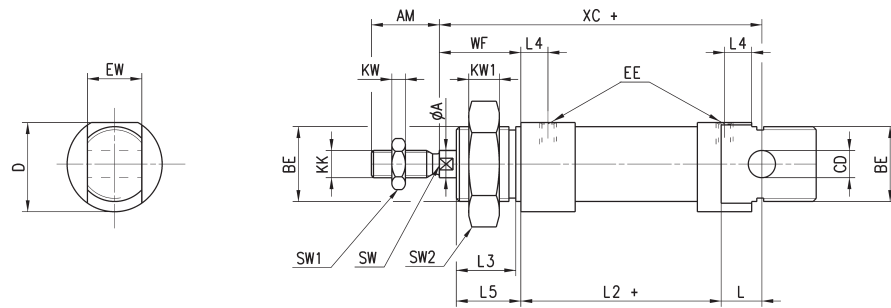
Nose nut Mod. V-94 and  
Mod. U-90



All accessories are supplied separately, except for piston rod lock nut Mod. U

## Cylinders Series 94 and 95

With threaded front and rear end blocks

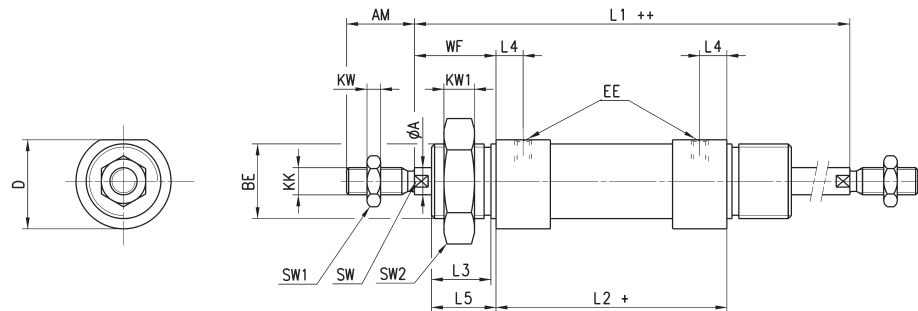


+ = add the stroke

| DIMENSIONS |    |    |    |         |    |      |      |    |          |    |     |    |    |      |     |    |    |     |     |    |     |
|------------|----|----|----|---------|----|------|------|----|----------|----|-----|----|----|------|-----|----|----|-----|-----|----|-----|
| Mod.       | ∅  | A  | AM | BE      | CD | D    | EE   | EW | KK       | KW | KW1 | L  | L2 | L3   | L4  | L5 | SW | SW1 | SW2 | WF | XC  |
| 94         | 16 | 6  | 16 | M16x1.5 | 6  | 21.2 | M5   | 12 | M6       | 4  | 5   | 9  | 51 | 14   | 5.5 | 15 | 5  | 10  | 24  | 22 | 82  |
| 94         | 20 | 8  | 20 | M22x1.5 | 8  | 26.2 | G1/8 | 16 | M8       | 5  | 5   | 12 | 59 | 17.5 | 8   | 19 | 7  | 13  | 32  | 24 | 95  |
| 94-95      | 25 | 10 | 22 | M22x1.5 | 8  | 32.5 | G1/8 | 16 | M10x1.25 | 6  | 5   | 12 | 64 | 18.5 | 7.5 | 20 | 8  | 17  | 32  | 28 | 104 |

## Cylinders Series 94 and 95 - through-rod

With threaded end blocks



+ = add the stroke once  
++ = add the stroke twice

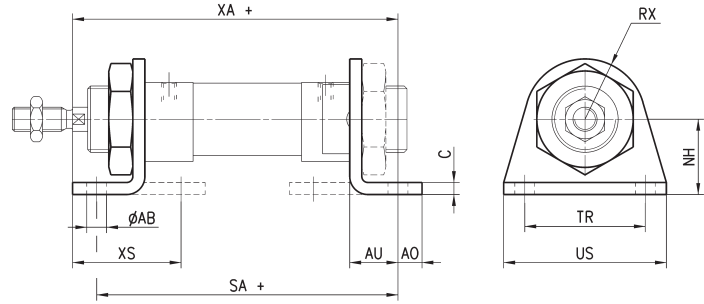
| DIMENSIONS |    |    |    |         |      |      |          |    |     |     |    |      |     |    |    |     |     |    |    |  |
|------------|----|----|----|---------|------|------|----------|----|-----|-----|----|------|-----|----|----|-----|-----|----|----|--|
| Mod.       | ∅  | A  | AM | BE      | D    | EE   | KK       | KW | KW1 | L1  | L2 | L3   | L4  | L5 | SW | SW1 | SW2 | WF | XC |  |
| 94         | 16 | 6  | 16 | M16x1.5 | 21.2 | M5   | M6       | 4  | 5   | 100 | 56 | 14   | 5.5 | 15 | 5  | 10  | 24  | 22 |    |  |
| 94         | 20 | 8  | 20 | M22x1.5 | 26.2 | G1/8 | M8       | 5  | 5   | 116 | 68 | 17.5 | 8   | 19 | 7  | 13  | 32  | 24 |    |  |
| 94-95      | 25 | 10 | 22 | M22x1.5 | 32.5 | G1/8 | M10x1.25 | 6  | 5   | 125 | 69 | 18.5 | 7.5 | 20 | 8  | 17  | 32  | 28 |    |  |

### Foot mount Mod. B



Material: stainless steel 304

Supplied with:  
2x feet  
1x nut



+ = add the stroke

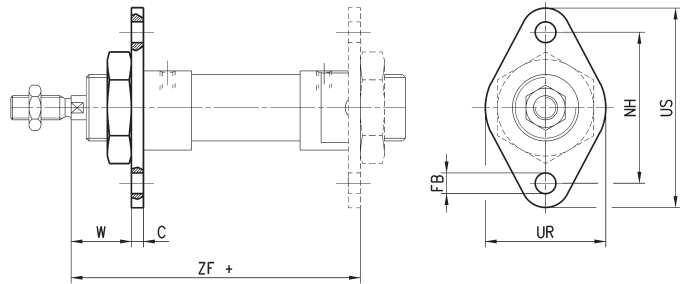
| DIMENSIONS |    |     |    |     |     |    |    |   |    |    |    |    |
|------------|----|-----|----|-----|-----|----|----|---|----|----|----|----|
| Mod.       | ∅  | ∅AB | XS | XA+ | SA+ | AO | AU | C | RX | TR | US | NH |
| B-94-12-16 | 16 | 5,5 | 32 | 91  | 82  | 6  | 13 | 3 | 13 | 32 | 42 | 20 |
| B-94-20-25 | 20 | 6,6 | 36 | 108 | 100 | 8  | 16 | 4 | 20 | 40 | 54 | 25 |
| B-94-20-25 | 25 | 6,6 | 40 | 113 | 101 | 8  | 16 | 4 | 20 | 40 | 54 | 25 |

### Flange bracket Mod. E



Material: stainless steel 304

Supplied with:  
1x flange



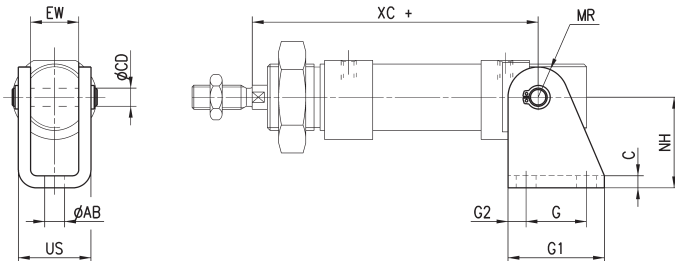
+ = add the stroke

| DIMENSIONS |    |    |   |     |     |    |    |    |  |
|------------|----|----|---|-----|-----|----|----|----|--|
| Mod.       | ∅  | W  | C | ZF+ | FB  | UR | TF | UF |  |
| E-94-12-16 | 16 | 19 | 3 | 81  | 5,5 | 30 | 40 | 53 |  |
| E-94-20-25 | 20 | 20 | 4 | 96  | 6,6 | 40 | 50 | 66 |  |
| E-94-20-25 | 25 | 24 | 4 | 101 | 6,6 | 40 | 50 | 66 |  |

### Trunnion Bracket Mod. I

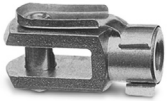


Material: stainless steel 304

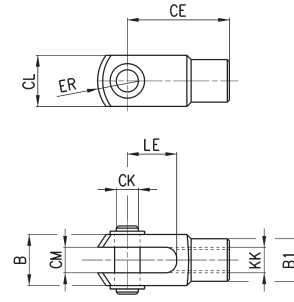


| DIMENSIONS |    |     |   |    |    |    |    |    |    |    |      |     |
|------------|----|-----|---|----|----|----|----|----|----|----|------|-----|
| Mod.       | ∅  | AB  | C | CD | EW | G  | G1 | G2 | MR | NH | US   | XC+ |
| I-94-12-16 | 16 | 5,5 | 3 | 6  | 12 | 15 | 25 | 5  | 7  | 27 | 18,1 | 82  |
| I-94-20-25 | 20 | 6,6 | 4 | 8  | 16 | 20 | 32 | 6  | 10 | 30 | 24,1 | 95  |
| I-94-20-25 | 25 | 6,6 | 4 | 8  | 16 | 20 | 32 | 6  | 10 | 30 | 24,1 | 104 |

### Rod Fork End Mod. G-94/90



ISO 8140  
Material: stainless steel 303

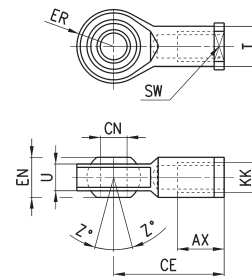


| DIMENSIONS |    |    |    |          |    |    |    |    |    |    |
|------------|----|----|----|----------|----|----|----|----|----|----|
| Mod.       | ∅  | CK | LE | KK       | CM | ER | CE | CL | B  | B1 |
| G-94-12-16 | 16 | 6  | 12 | M6x1     | 6  | 7  | 24 | 12 | 16 | 10 |
| G-94-20    | 20 | 8  | 16 | M8x1,25  | 8  | 10 | 32 | 16 | 22 | 14 |
| G-90-25-32 | 25 | 10 | 20 | M10x1,25 | 10 | 12 | 40 | 20 | 26 | 18 |

### Swivel Ball Joint Mod. GA-94/90



ISO 8139  
Materials:  
- stainless steel 304 bracket  
- stainless steel 420 spherical ring  
- sintered bronze bushing

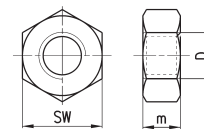


| DIMENSIONS  |    |    |      |    |    |    |    |          |      |     |    |
|-------------|----|----|------|----|----|----|----|----------|------|-----|----|
| Mod.        | ∅  | CN | U    | EN | ER | AX | CE | KK       | T    | Z   | SW |
| GA-94-12-16 | 16 | 6  | 7    | 9  | 10 | 12 | 30 | M6x1     | 10   | 6,5 | 11 |
| GA-94-20    | 20 | 8  | 9    | 12 | 12 | 16 | 36 | M8x1,25  | 12,5 | 6,5 | 14 |
| GA-90-32    | 25 | 10 | 10,5 | 14 | 14 | 20 | 43 | M10x1,25 | 15   | 6,5 | 17 |

### Piston Rod Lock Nut Mod. U-94/90



ISO 4035  
Material: stainless steel 304

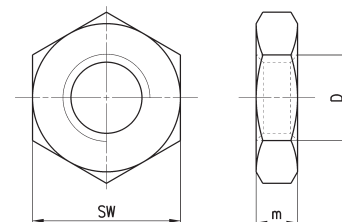


| DIMENSIONS |    |          |   |    |
|------------|----|----------|---|----|
| Mod.       | ∅  | D        | m | SW |
| U-94-12-16 | 16 | M6x1     | 4 | 10 |
| U-94-20    | 20 | M8x1,25  | 5 | 13 |
| U-90-25-32 | 25 | M10x1,25 | 6 | 17 |

### Nose Nut Mod. V-94 and Mod. U-90



ISO 4035  
Material: stainless steel 304



| DIMENSIONS |       |         |    |    |
|------------|-------|---------|----|----|
| Mod.       | ∅     | D       | m  | SW |
| U-90-50-63 | 16    | M16x1,5 | 8  | 24 |
| V-94-20-25 | 20-25 | M22x1,5 | 10 | 32 |