

# Stainless Steel Cylinders DIN ISO 6431 and VDMA 24 562

Bores from 32 to 200 mm

Double acting

| Standard executions |        |      |
|---------------------|--------|------|
| Version             | Symbol | TYPE |
| MAGNETIC STANDARD   |        | AMX  |

STAINLESS  
STEEL



For the magnetic reed switches type ASV see from page 1.110.1.  
For coupling cylinders/reed switches/brackets see table on page 1.120.5  
For mounting accessories see from page 5.40.1  
For rod accessories see from page 5.20.1.



On request, they can be supplied according Directive 94/9/EC - ATEX  
CE II 2 GDc T5

New series of stainless steel 316 L cylinders conforming to DIN 6431 and VDMA 24 562.

Round tube and external tie-rods, standard with adjustable cushionings.

Scraper ring in polyurethane specially developed for chemical and food industries.

The main features of this cylinder are the “clean” modern design and the attention to details.

A particular attention has been given to the manufacture of the end caps; there are no external casting cavities, thus eliminating contamination traps.

In order to facilitate the replacement of the piston rod seal the nose has been developed for simple maintenances also on cylinders still mounted on a machine.

| Options  | Sigla  |
|--|--------|
| Through rod (page 5.5.4)   | P      |
| Seals FKM max 150°C (scraper ring only = V1)   | V      |
| Tandem forward movement piston rods coupled together (page 5.5.5)  | TA1    |
| Tandem forward movement piston rods independent (page 5.5.5)   | TA2    |
| Tandem back to back (page 5.5.5)   | TA3    |
| Tandem front to front (page 5.5.5)   | TA4    |
| Extended rod (indicate the requested WH dimension in mm. E.g.: WH -100).   | WH-... |
| Without adjustable cushionings   | D      |
| Adjustable rear cushioning only  | D1     |
| Adjustable front cushioning only   | D2     |
| Special male thread (indicate the requested thread. E.g. : R-M 10x1,5).<br>The dimension AM of the special thread will be the same as the standard. The cylinder will be supplied without rod nut. | R-M... |
| Female thread; for dimensions see page 5.5.4   | F      |
| With bellows for protection of the rod (in this case the dimension WH will be extended according the stroke of the cylinder)   | Z      |
| Special on request   | /S     |

The options can be combined (when this is possible).

The suffix of the options are to be added to the model number of the standard product, as shown in the following table.

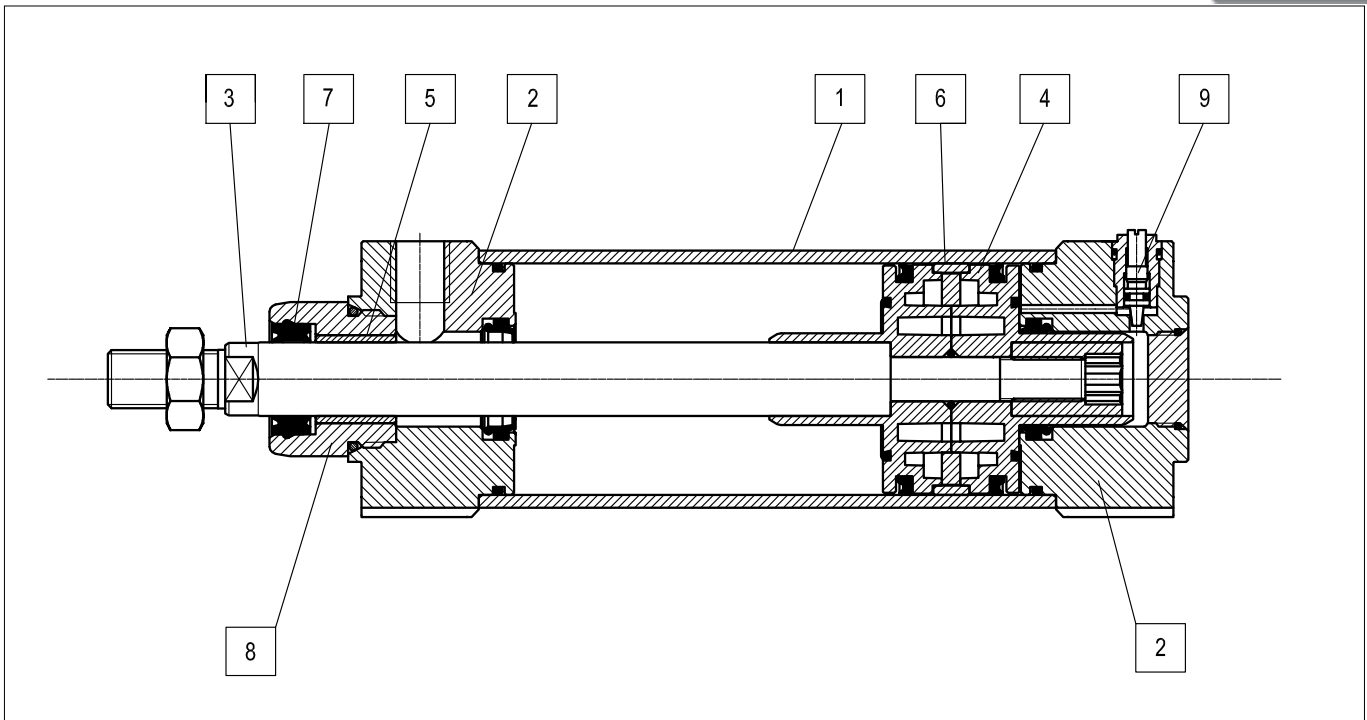
How to order: 63 / 100 AMXPVR-M12x1,25

|      |   |        |      |        |        |            |
|------|---|--------|------|--------|--------|------------|
| 63   | / | 100    | AMX  | P      | V      | R-M12X1,25 |
| Bore | / | Stroke | Type | Option | Option | Option     |

# Stainless Steel Cylinders DIN ISO 6431 and VDMA 24 562

Bores from 32 to 200 mm

Technical data



| Materials (standard types)                     |   |
|--|---|
| 1  | Tube and tie-rods<br>Stainless steel AISI 316L      |
| 2  | Heads<br>Stainless steel AISI 316L                  |
| 3  | Rod<br>Stainless steel AISI 316L, lapped            |
| 4  | Piston<br>Die-cast aluminium                        |
| 5  | Bushing<br>Self-lubricating sintered bronze         |
| 6  | Guide ring<br>Natural Delrin                        |
| 7  | Rod seals<br>Special polyurethane                   |
| 8  | Disassembling nose<br>Stainless steel AISI 316L     |
| 9  | Group cushioning screw<br>Stainless steel AISI 316L |
| Other seals<br>Nitrile rubber NBR/polyurethane |   |

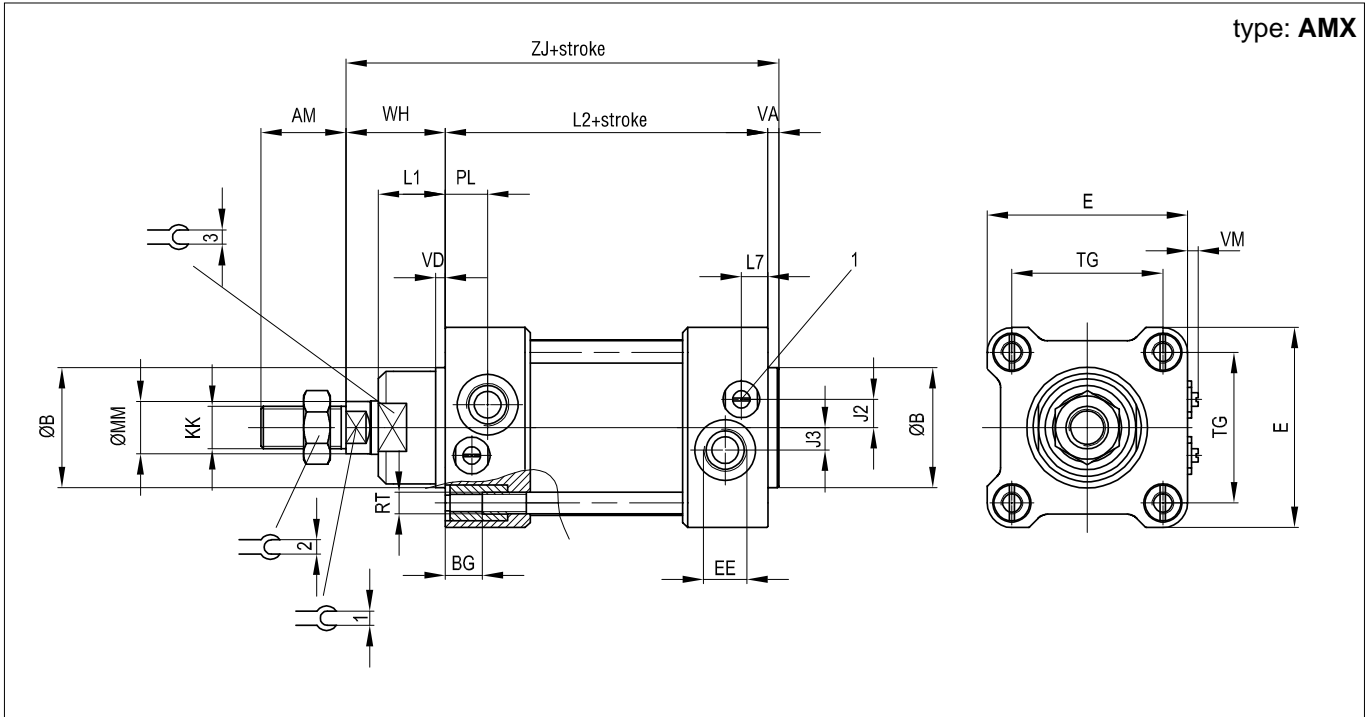
| Technical data    |   |            |           |      |           |      |         |         |     |
|-------------------|---|------------|-----------|------|-----------|------|---------|---------|-----|
| Bore (mm)         | 32  | 40         | 50        | 63   | 80        | 100  | 125     | 160     | 200 |
| Fluid             | Compressed filtered air with or without lubrication |            |           |      |           |      |         |         |     |
| Pressure range    | 0,5 ÷ 10 bar  |            |           |      |           |      |         |         |     |
| Temperature range | -20 °C ÷ +80 °C                                     |            |           |      |           |      |         |         |     |
| Stroke            | from 10 mm to 2500 mm                               |            |           |      |           |      |         |         |     |
| Cushion length    | 20  | 22         | 25        | 25   | 35        | 35   | 35      | 48      | 48  |
| Ports             | 1/8"  | 1/4"       |           | 3/8" |           | 1/2" |         | 3/4"    |     |
| Rod thread        | M10 x 1,25  | M12 x 1,25 | M16 x 1,5 |      | M20 x 1,5 |      | M27 x 2 | M36 x 2 |     |
| Weight            | Stroke zero (g)                                     |            |           |      |           |      |         |         |     |
|                   | Additional 10 mm stroke (g)                         |            |           |      |           |      |         |         |     |

# Stainless Steel Cylinders DIN ISO 6431 and VDMA 24 562

## Bores from 32 to 200 mm

Standard dimensions

type: **AMX**



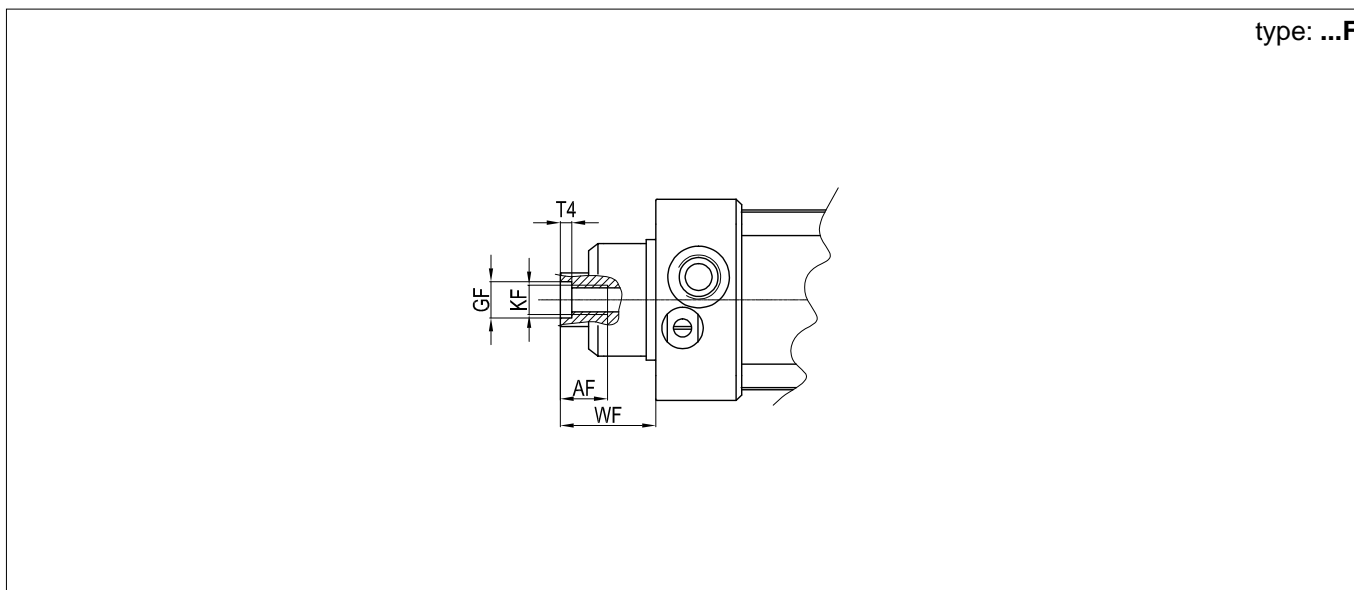
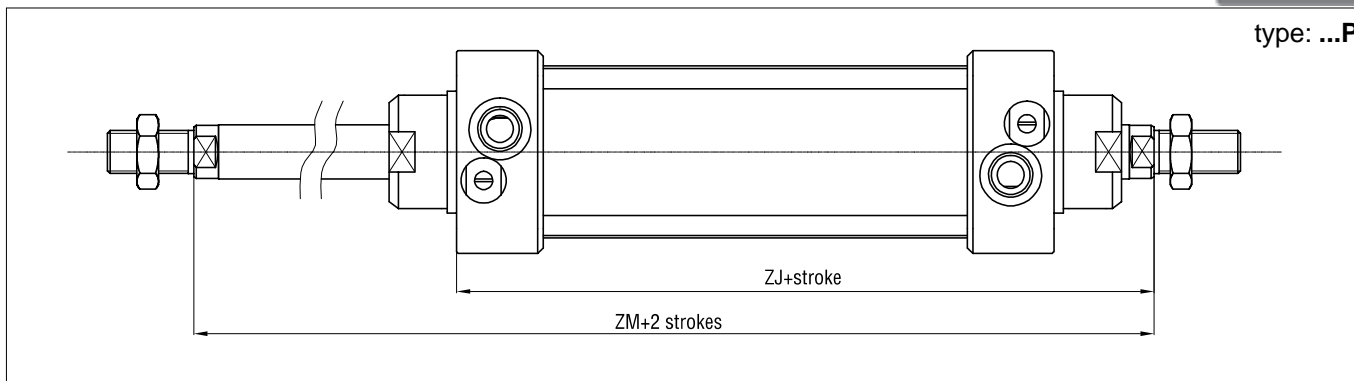
| Ø (mm) | AM | B<br>Ø d11 | BG | E   | EE               | J2   | J3  | KK       | L1 | L2  |
|--------|----|------------|----|-----|------------------|------|-----|----------|----|-----|
| 32     | 22 | 30         | 11 | 47  | G <sup>1/8</sup> | 6,5  | 5,5 | M10x1,25 | 20 | 94  |
| 40     | 24 | 35         | 11 | 52  | G <sup>1/4</sup> | 8    | 6   | M12x1,25 | 22 | 105 |
| 50     | 32 | 40         | 13 | 65  | G <sup>1/4</sup> | 9,5  | 7,5 | M16x1,5  | 26 | 106 |
| 63     | 32 | 45         | 13 | 75  | G <sup>3/8</sup> | 11,5 | 8,5 | M16x1,5  | 25 | 121 |
| 80     | 40 | 45         | 15 | 95  | G <sup>3/8</sup> | 10,5 | 9,5 | M20x1,5  | 32 | 128 |
| 100    | 40 | 55         | 15 | 115 | G <sup>1/2</sup> | 15   | 10  | M20x1,5  | 38 | 138 |
| 125    | 54 | 60         | 17 | 140 | G <sup>1/2</sup> | 15   | 10  | M27x2    | 40 | 160 |
| 160    | 72 | 65         | 20 | 180 | G <sup>3/4</sup> | 15   | 15  | M36x2    | 50 | 180 |
| 200    | 72 | 75         | 20 | 220 | G <sup>3/4</sup> | 15   | 15  | M36x2    | 65 | 180 |

| Ø (mm) | L7   | MM<br>Ø f8 | PL   | RT  | TG   | VA | VD | WH | ZJ  | ⌀ 1 | ⌀ 2 | ⌀ 3 |
|--------|------|------------|------|-----|------|----|----|----|-----|-----|-----|-----|
| 32     | 18   | 12         | 14   | M6  | 32,5 | 4  | 4  | 26 | 120 | 10  | 17  | 27  |
| 40     | 20   | 16         | 15   | M6  | 38   | 4  | 4  | 30 | 135 | 13  | 19  | 32  |
| 50     | 20   | 20         | 15   | M8  | 46,5 | 4  | 4  | 37 | 143 | 17  | 24  | 36  |
| 63     | 10   | 20         | 16   | M8  | 56,5 | 4  | 4  | 37 | 158 | 17  | 24  | 38  |
| 80     | 13,5 | 25         | 20,5 | M10 | 72   | 4  | 4  | 46 | 174 | 22  | 30  | 42  |
| 100    | 13   | 25         | 20   | M10 | 89   | 4  | 4  | 51 | 189 | 22  | 30  | 50  |
| 125    | 33   | 32         | 25   | M12 | 110  | 5  | 5  | 65 | 225 | 27  | 41  | 52  |
| 160    | 32   | 40         | 25   | M16 | 140  | 8  | 8  | 80 | 268 | 36  | 55  | 60  |
| 200    | 34   | 40         | 25   | M16 | 175  | 8  | 8  | 95 | 283 | 36  | 55  | 70  |

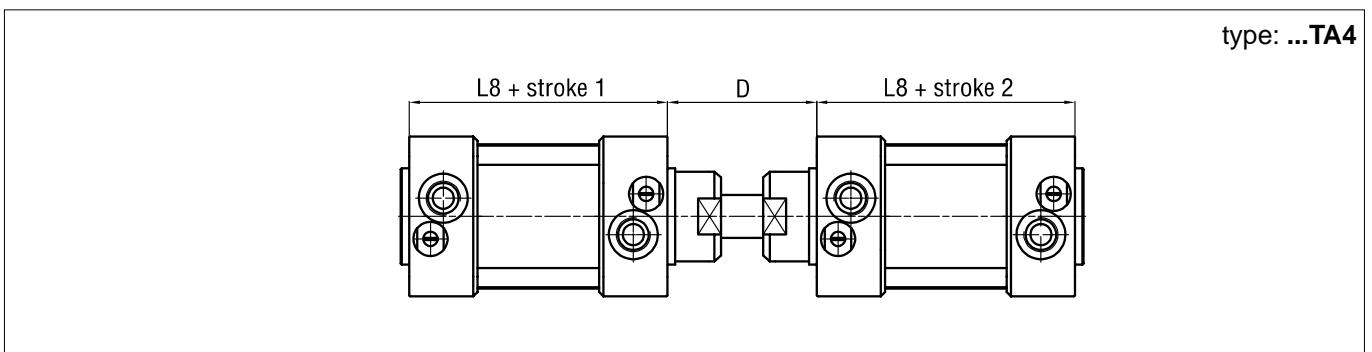
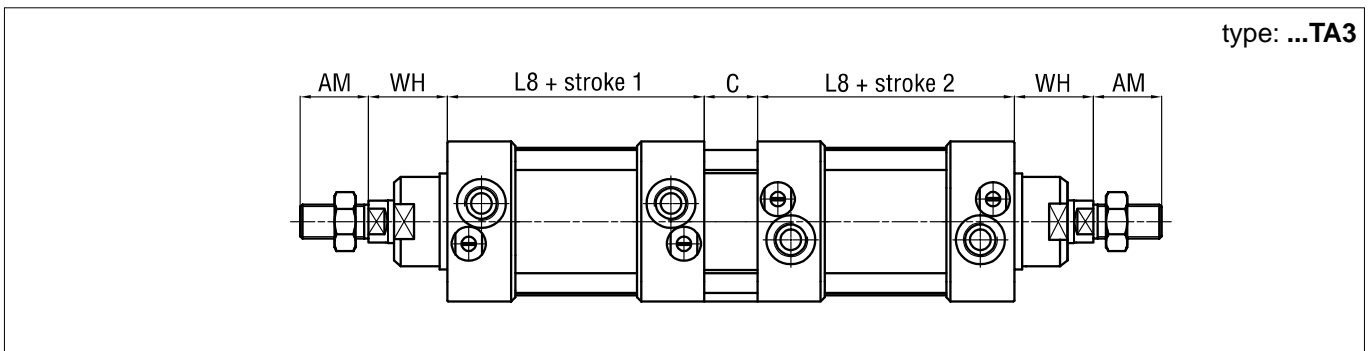
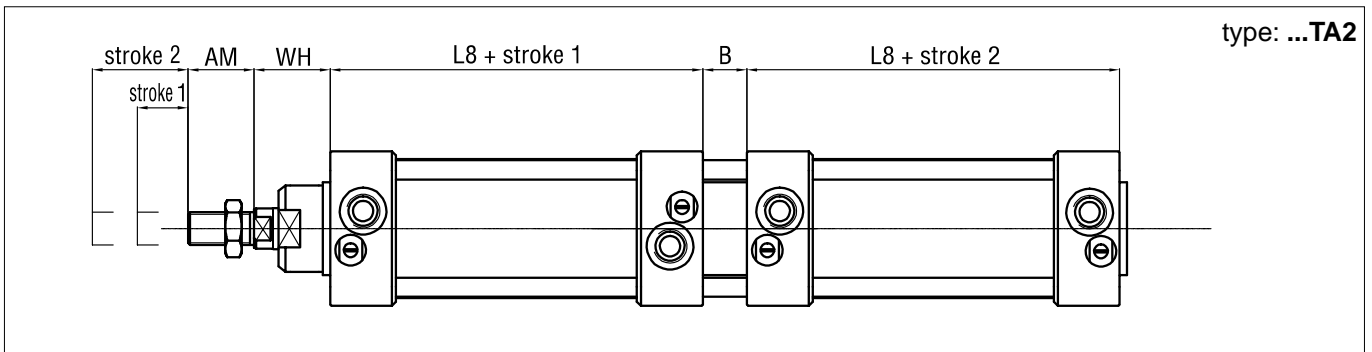
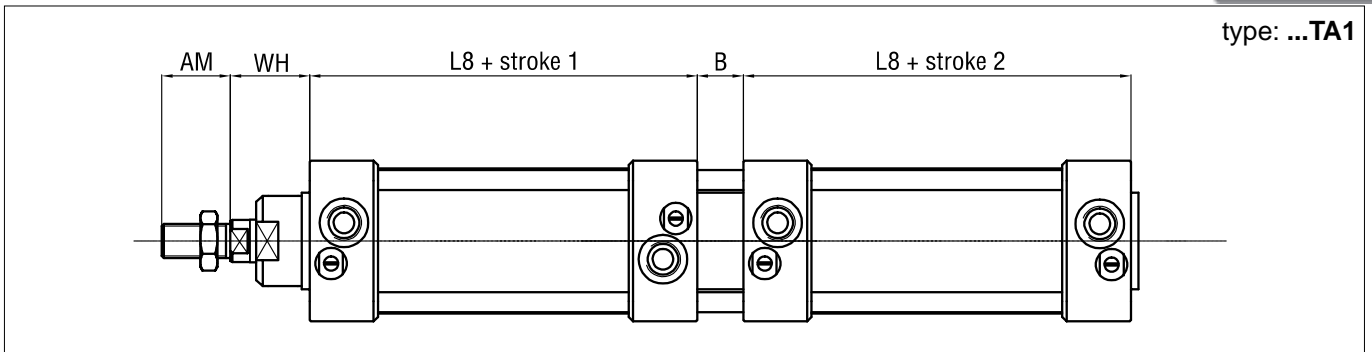
# Stainless Steel Cylinders DIN ISO 6431 and VDMA 24 562

Bores from 32 to 200 mm

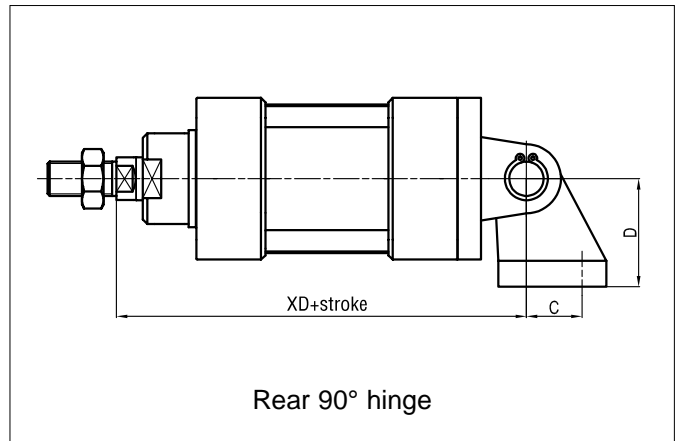
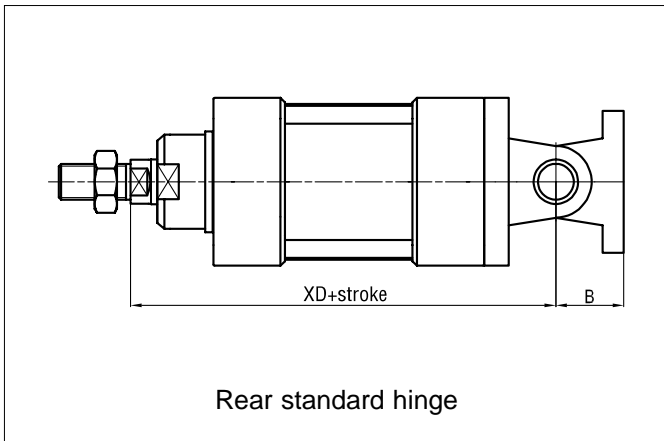
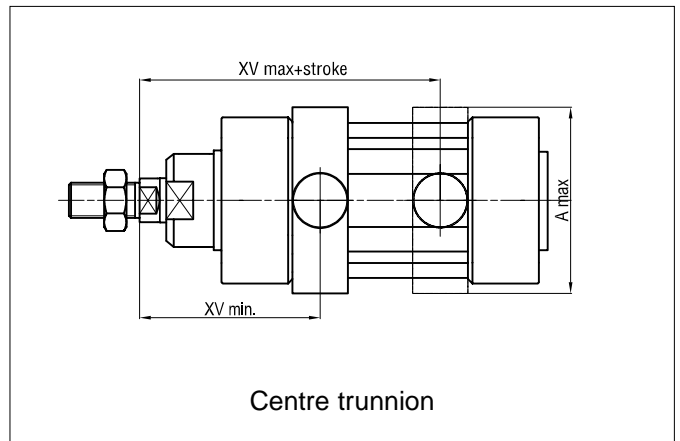
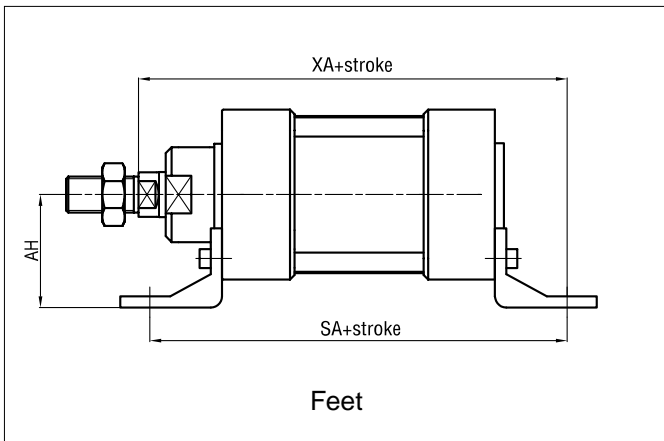
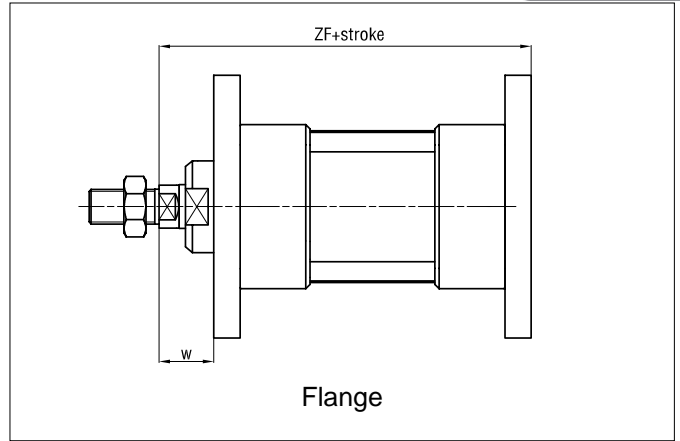
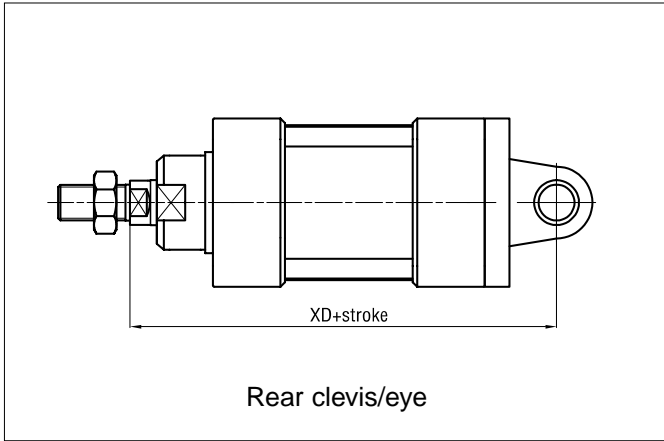
Options



| Ø mm | AF | KF  | T4  | WF | GF | ZJ  | ZM  |
|------|----|-----|-----|----|----|-----|-----|
| 32   | 12 | M6  | 2,6 | 26 | 8  | 120 | 146 |
| 40   | 12 | M8  | 3,3 | 30 | 10 | 135 | 165 |
| 50   | 16 | M10 | 4,7 | 37 | 12 | 143 | 180 |
| 63   | 16 | M10 | 4,7 | 37 | 12 | 158 | 195 |
| 80   | 20 | M12 | 6,1 | 46 | 14 | 174 | 220 |
| 100  | 20 | M12 | 6,1 | 51 | 14 | 189 | 240 |
| 125  | 32 | M16 | 8   | 65 | 18 | 225 | 290 |
| 160  | 36 | M20 | 10  | 80 | 22 | 260 | 340 |
| 200  | 36 | M20 | 10  | 95 | 22 | 275 | 370 |



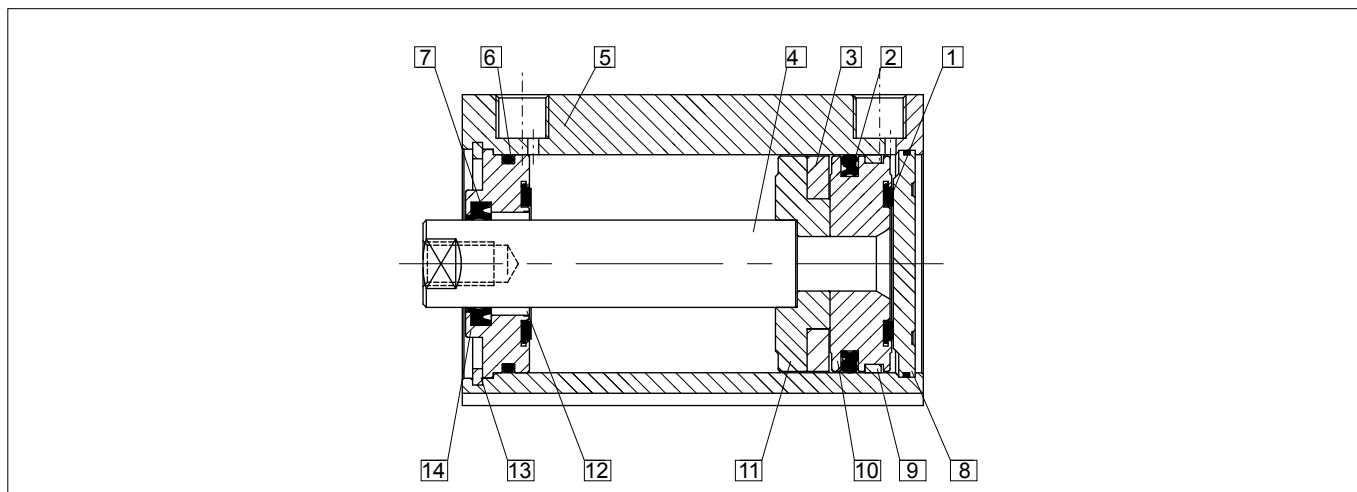
| Ø mm | AM | B   | C  | D   | L8  | WH |
|------|----|-----|----|-----|-----|----|
| 32   | 22 | 40  | 12 | 48  | 94  | 26 |
| 40   | 24 | 44  | 12 | 54  | 105 | 30 |
| 50   | 32 | 52  | 16 | 69  | 106 | 37 |
| 63   | 32 | 50  | 16 | 69  | 121 | 37 |
| 80   | 40 | 64  | 20 | 86  | 128 | 46 |
| 100  | 40 | 76  | 20 | 91  | 138 | 51 |
| 125  | 54 | 80  | 35 | 120 | 160 | 65 |
| 160  | 72 | 100 | 50 | 152 | 180 | 80 |
| 200  | 72 | 130 | 50 | 167 | 180 | 95 |



For dimensions and codes of the accessories: see page 5.40.1

| Ø mm | A max | AH  | B  | C  | D  | SA  | W  | XA    | XD  | XV min | XV max | ZF  |
|------|-------|-----|----|----|----|-----|----|-------|-----|--------|--------|-----|
| 32   | 70    | 32  | 22 | 21 | 32 | 142 | 16 | 144   | 142 | 60     | 86     | 130 |
| 40   | 78    | 36  | 25 | 24 | 36 | 161 | 20 | 163   | 160 | 69     | 96     | 145 |
| 50   | 91    | 45  | 27 | 33 | 45 | 170 | 25 | 175   | 170 | 78     | 102    | 155 |
| 63   | 94    | 50  | 32 | 37 | 50 | 185 | 25 | 190   | 190 | 82     | 113    | 170 |
| 80   | 130   | 63  | 36 | 47 | 63 | 210 | 30 | 215   | 210 | 97     | 123    | 190 |
| 100  | 145   | 71  | 41 | 55 | 71 | 220 | 35 | 230   | 230 | 107    | 133    | 205 |
| 125  | 170   | 90  | 50 | 70 | 90 | 250 | 45 | 270   | 275 | 126,5  | 163,5  | 245 |
| 160  | 190   | 115 | 55 | /  | /  | 270 | 55 | 305   | 315 | 150    | 190    | 285 |
| 200  | 240   | 135 | 60 | /  | /  | 275 | 70 | 322,5 | 335 | 165    | 205    | 300 |



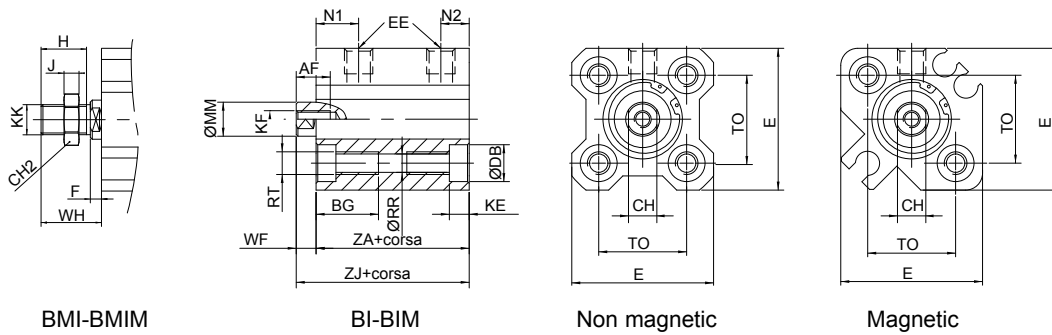


| Materials (standard types) |                |   |
|----------------------------|----------------|---|
| 1                          | Buffer         | Nitrilic rubber NBR                                     |
| 2                          | Piston seals   | Nitrilic rubber NBR                                     |
| 3                          | Magnet         | Magnetic material                                       |
| 4                          | Rod            | Chrome-plated steel C45                                 |
| 5                          | Tube           | Aluminium anodised                                      |
| 6                          | Seals          | Nitrilic rubber NBR                                     |
| 7                          | Rod seals      | Nitrilic rubber NBR                                     |
| 8                          | Posterior head | Aluminium anodised                                      |
| 9                          | Guide shoe     | PTFE + graphite   |
| 10                         | Semi piston    | Aluminium alloy   |
| 11                         | Semi piston    | Aluminium alloy   |
| 12                         | Bushing        | Self-lubricating sintered bronze                        |
| 13                         | Seeger         | Harmonic steel  |
| 14                         | Front head     | Brass (Ø 12 - 25 mm)<br>Aluminium alloy (Ø 32 - 100 mm) |

| Bores (mm) | Standard stroke<br>BI - BMI - BIM - BMIM                           |
|------------|--|
| 12         | 5, 10, 15, 20, 25, 30  |
| 16         | 5, 10, 15, 20, 25, 30  |
| 20         | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |
| 25         | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |
| 32         | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |
| 40         | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |
| 50         | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |
| 63         | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |
| 80         | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |
| 100        | 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 75, 80, 90, 100 |



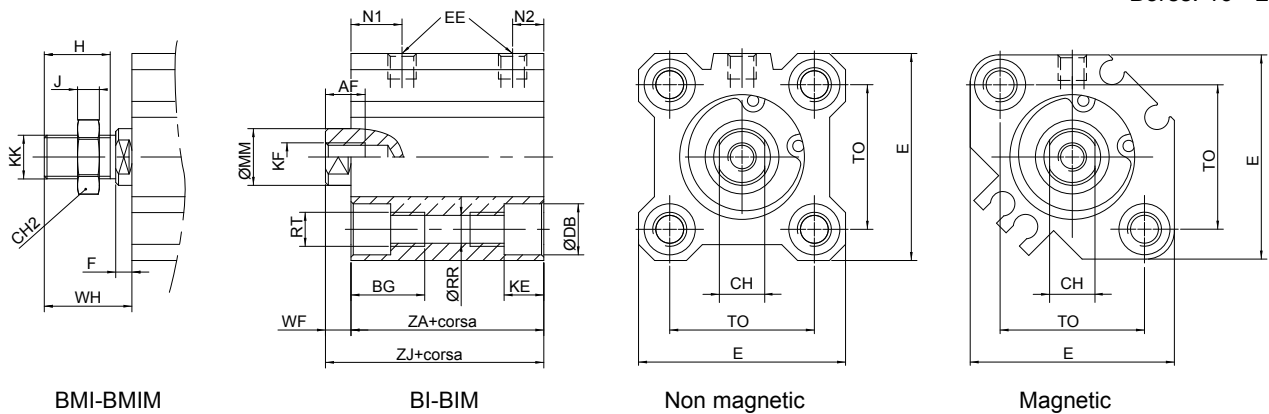
Type: **BI - BMI - BIM - BMIM**  
Bore: 12



| Ø (mm) | Ø MM f7 | AF | WF  | Non magnetic |    |     |    | Magnetic |    |    |    | EE | BG | RR  | E  | TO ±1 | RT |
|--------|---------|----|-----|--------------|----|-----|----|----------|----|----|----|----|----|-----|----|-------|----|
|        |         |    |     | ZJ           | ZA | N1  | N2 | ZJ       | ZA | N1 | N2 |    |    |     |    |       |    |
| 12     | 6       | 6  | 3,5 | 20,5         | 17 | 7,5 | 5  | 31,5     | 28 | 9  | 7  | M5 | 11 | 3,5 | 25 | 15,5  | M4 |

| Ø (mm) | Ø DB | KE  | KF | CH | H | J | F   | WH | KK | CH2 |
|--------|------|-----|----|----|---|---|-----|----|----|-----|
| 12     | 6,5  | 3,5 | M3 | 5  | 9 | 4 | 3,5 | 14 | M5 | 8   |

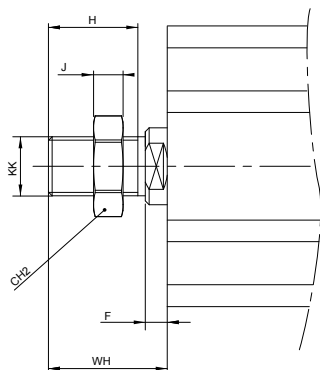
Type: **BI - BMI - BIM - BMIM**  
Bores: 16 - 25



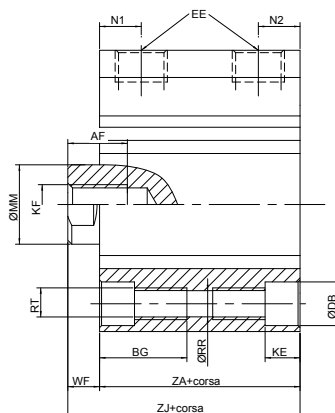
| Ø (mm) | Ø MM f7 | AF | WF  | Non magnetic |          |          |          | Magnetic |     |      |      |    |     |
|--------|---------|----|-----|--------------|----------|----------|----------|----------|-----|------|------|----|-----|
|        |         |    |     | ZJ (≤55)     | ZJ (>55) | ZA (≤55) | ZA (>55) | N1       | N2  | ZJ   | ZA   | N1 | N2  |
| 16     | 8       | 8  | 3,5 | 22           |          | 18,5     |          | 8        | 5,5 | 34   | 30,5 | 8  | 5,5 |
| 20     | 10      | 7  | 4,5 | 24           | 34       | 19,5     | 29,5     | 9        | 5,5 | 36   | 31,5 | 9  | 5,5 |
| 25     | 12      | 12 | 5   | 27           | 37,5     | 22,5     | 32,5     | 11       | 5,5 | 37,5 | 32,5 | 11 | 5,5 |

| Ø (mm) | EE | BG | RR  | E  | TO ±1 | RT | Ø DB | KE  | KF | CH | H  | J | F   | WH   | KK  | CH2 |
|--------|----|----|-----|----|-------|----|------|-----|----|----|----|---|-----|------|-----|-----|
| 16     | M5 | 11 | 3,5 | 29 | 19,8  | M4 | 6,5  | 3,4 | M4 | 6  | 10 | 5 | 3,5 | 15,5 | M6  | 10  |
| 20     | M5 | 17 | 5,5 | 36 | 25,5  | M6 | 9    | 7   | M5 | 8  | 12 | 6 | 4,5 | 18,5 | M8  | 12  |
| 25     | M5 | 17 | 5,5 | 40 | 28    | M6 | 9    | 7   | M6 | 10 | 15 | 6 | 5   | 22,5 | M10 | 17  |

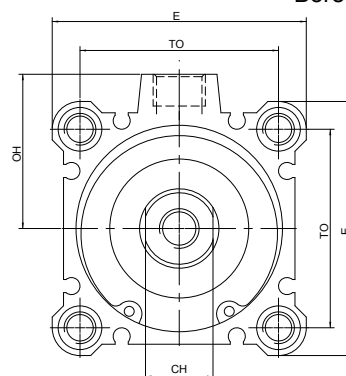
Type: **BI - BMI - BIM - BMIM**  
Bores: 32 - 100



BMI-BMIM



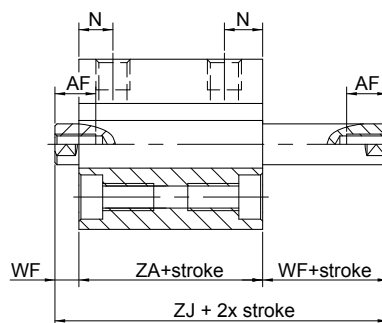
BI-BIM



| Ø (mm) | Ø MM f7 | AF | WF | Non magnetic |          |          |          |         |         |         |         | Magnetic |      |      |      |
|--------|---------|----|----|--------------|----------|----------|----------|---------|---------|---------|---------|----------|------|------|------|
|        |         |    |    | ZJ (≤55)     | ZJ (>55) | ZA (≤55) | ZA (>55) | N1 (=5) | N1 (>5) | N2 (=5) | N2 (>5) | ZJ       | ZA   | N1   | N2   |
| 32     | 16      | 13 | 7  | 30           | 40       | 23       | 33       | 7,5     | 10,5    | 6,5     | 7,5     | 40       | 33   | 10,5 | 7,5  |
| 40     | 16      | 13 | 7  | 36,5         | 46,5     | 29,5     | 39,5     | 11      |         | 8       |         | 46,5     | 39,5 | 11   | 8    |
| 50     | 20      | 15 | 8  | 38,5         | 48,5     | 30,5     | 40,5     | 9       | 10,5    | 9       | 10,5    | 48,5     | 40,5 | 10,5 | 10,5 |
| 63     | 20      | 15 | 8  | 44           | 54       | 36       | 46       | 14      | 15      | 9,5     | 10,5    | 54       | 46   | 15   | 10,5 |
| 80     | 25      | 20 | 10 | 53,5         | 63,5     | 43,5     | 53,5     | 16      |         | 14      |         | 63,5     | 53,5 | 16   | 14   |
| 100    | 32      | 26 | 12 | 65           | 75       | 53       | 63       | 20      |         | 17,5    |         | 75       | 63   | 20   | 17,5 |

| Ø (mm) | EE   | BG   | RR  | E   | OH   | TO ±1 | RT  | Ø DB | KE   | KF  | CH | H    | J  | F | WH   | KK      | CH2 |
|--------|------|------|-----|-----|------|-------|-----|------|------|-----|----|------|----|---|------|---------|-----|
| 32     | 1/8" | 17   | 5,6 | 45  | 27,1 | 34    | M6  | 9    | 7    | M8  | 14 | 20,5 | 8  | 5 | 28,5 | M14x1,5 | 19  |
| 40     | 1/8" | 17   | 5,6 | 52  | 31   | 40    | M6  | 9    | 7    | M8  | 14 | 20,5 | 8  | 5 | 28,5 | M14x1,5 | 19  |
| 50     | 1/4" | 22   | 6,6 | 64  | 38,9 | 50    | M8  | 11   | 8    | M10 | 17 | 26   | 11 | 5 | 33,5 | M18x1,5 | 27  |
| 63     | 1/4" | 28,5 | 9   | 77  | 45,5 | 60    | M10 | 14   | 10,5 | M10 | 17 | 26   | 11 | 5 | 33,5 | M18x1,5 | 27  |
| 80     | 3/8" | 35,5 | 11  | 98  | 55,5 | 77    | M12 | 17,5 | 13,5 | M16 | 22 | 32,5 | 13 | 8 | 43,5 | M22x1,5 | 32  |
| 100    | 3/8" | 35,5 | 11  | 117 | 65,5 | 94    | M12 | 17,5 | 13,5 | M20 | 27 | 32,5 | 13 | 8 | 43,5 | M26x1,5 | 36  |

Type: ...P



| Ø<br>(mm) | WF  | Non magnetic |      | Magnetic |      | AF                  | N                   |
|-----------|-----|--------------|------|----------|------|---------------------|---------------------|
|           |     | ZJ           | ZA   | ZJ       | ZA   |                     |                     |
| 20        | 4,5 | 35           | 26   | 47       | 38   | 7                   | 9,5                 |
| 25        | 5   | 39           | 29   | 49       | 39   | 9,5 (=5) - 12 (>5)  | 11                  |
| 32        | 7   | 44,5         | 30,5 | 54,5     | 40,5 | 9 (≤10) - 13 (>10)  | 10                  |
| 40        | 7   | 54           | 40   | 64       | 50   | 11 (≤10) - 13 (>10) | 13                  |
| 50        | 8   | 56,5         | 40,5 | 66,5     | 50,5 | 12 (≤10) - 15 (>10) | 13,5                |
| 63        | 8   | 58           | 42   | 68       | 52   | 12 (≤10) - 15 (>10) | 14,5 (=5) - 16 (>5) |
| 80        | 10  | 71           | 51   | 81       | 61   | 14 (≤15) - 20 (>15) | 16                  |
| 100       | 12  | 84,5         | 60,5 | 94,5     | 70,5 | 20 (≤25) - 26 (>25) | 21                  |