

Compact cylinders Series 31, Tandem and Multi-position versions

Double-acting, magnetic

Ø 12, 16, 20, 25, 32, 40, 50, 63, 80, 100 mm



- » Compact design
- » Available in different diameters and strokes
- » Standard magnetic

The compact dimensions allow Series 31 cylinders to be installed within very small spaces. These cylinders are suitable for use with feet, flange and trunnion mountings.

In order to complete the compact cylinder series, two new versions have been introduced: tandem and multi-position. The new Tandem version with 2, 3 or 4 stages generates a thrust force which is 2, 3 or 4 times that of the normal cylinder (standard traction force). The Multi-position version allows a maximum of 3 different positions which are determined by the stroke of the individual actuators.

GENERAL DATA

| | |
|--|--|
| Type of construction | compact profile |
| Operation | double-acting |
| Materials | AL body and end-blocks - rolled stainless steel AISI 303 rod - AL piston - PU rod and piston seals |
| Mounting | flange - feet - trunnion |
| Min and max strokes (for tandem 31M and 31F) | Ø12÷25 = 1÷80 mm Ø32÷100 = 1÷100 mm |
| Min and max strokes (for multi-position 31M and 31F) | Ø12÷25 = dimension for X2 max 200 mm Ø32÷63 = dimension for X2 max 300 mm Ø80÷100 = dimension for X2 max 400 mm |
| Operating temperature | 0°C ÷ 80°C (with dry air -20°C) |
| Operating pressure | 1 ÷ 10 bar |
| Medium: | filtered air, without lubrication. If lubricated air is used, it is recommended to use ISO VG32 oil. Once applied the lubrication should never be interrupted. |
| Speed: | 10 ÷ 1000 mm/sec (without load) |

CODING EXAMPLE

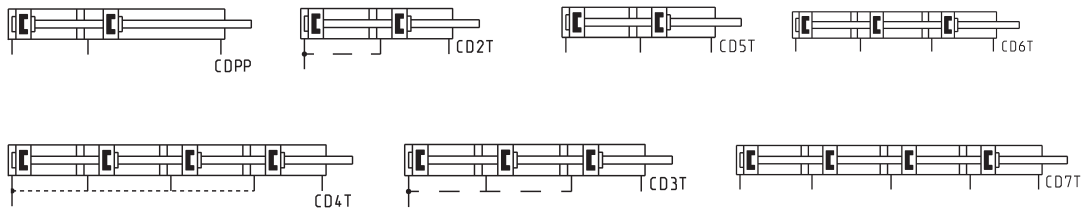
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|-----------|----------|----------|----------|------------|----------|------------|----------|----------|
| 31 | M | 2 | A | 032 | A | 050 | N | 2 |
|-----------|----------|----------|----------|------------|----------|------------|----------|----------|

| | | |
|------------|--|--|
| 31 | SERIES | |
| M | VERSION M = male rod thread, mounted with rod nut Mod. U F = female rod thread | |
| 2 | OPERATION 2 = double-acting | PNEUMATIC SYMBOLS CDPP |
| A | MATERIALS A = rolled stainless steel rod AISI 303 - AL tube profile | |
| 032 | BORE 012 = 12 mm - 016 = 16 mm - 020 = 20 mm - 025 = 25 mm 032 = 32 mm - 040 = 40 mm - 050 = 50 mm - 063 = 63 mm 080 = 80 mm - 100 = 100 mm | CD5T, CD6T, CD7T CD2T, CD3T, CD4T CD2T, CD3T, CD4T |
| A | CONSTRUCTION TYPE A = standard | |
| 050 | STROKE - tandem stroke (mm) - multi-position X1mm/X2mm. Insert stroke without the initial 0 (see application scheme). | |
| N | TANDEM AND MULTI-POSITION | |
| 2 | STAGES (only for tandem) 2 = 2 stages - 3 = 3 stages - 4 = 4 stages | |

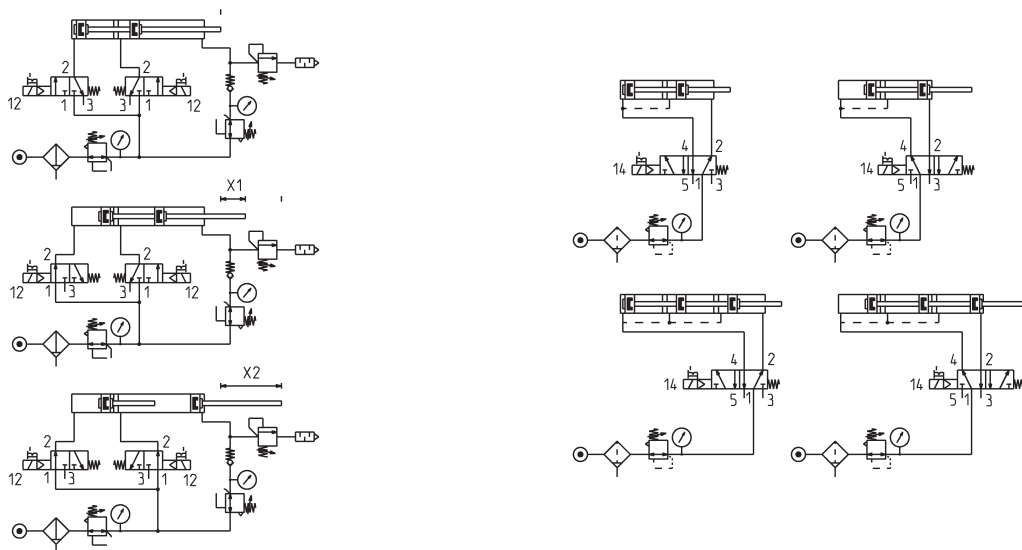
SERIES 31 CYLINDERS - TANDEM AND MULTI-POSITION

PNEUMATIC SYMBOLS

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



Application schemes



Multi-position
Example for ordering:
X1 = 25 mm and X2 = 100 mm
31M2A032A25/100N

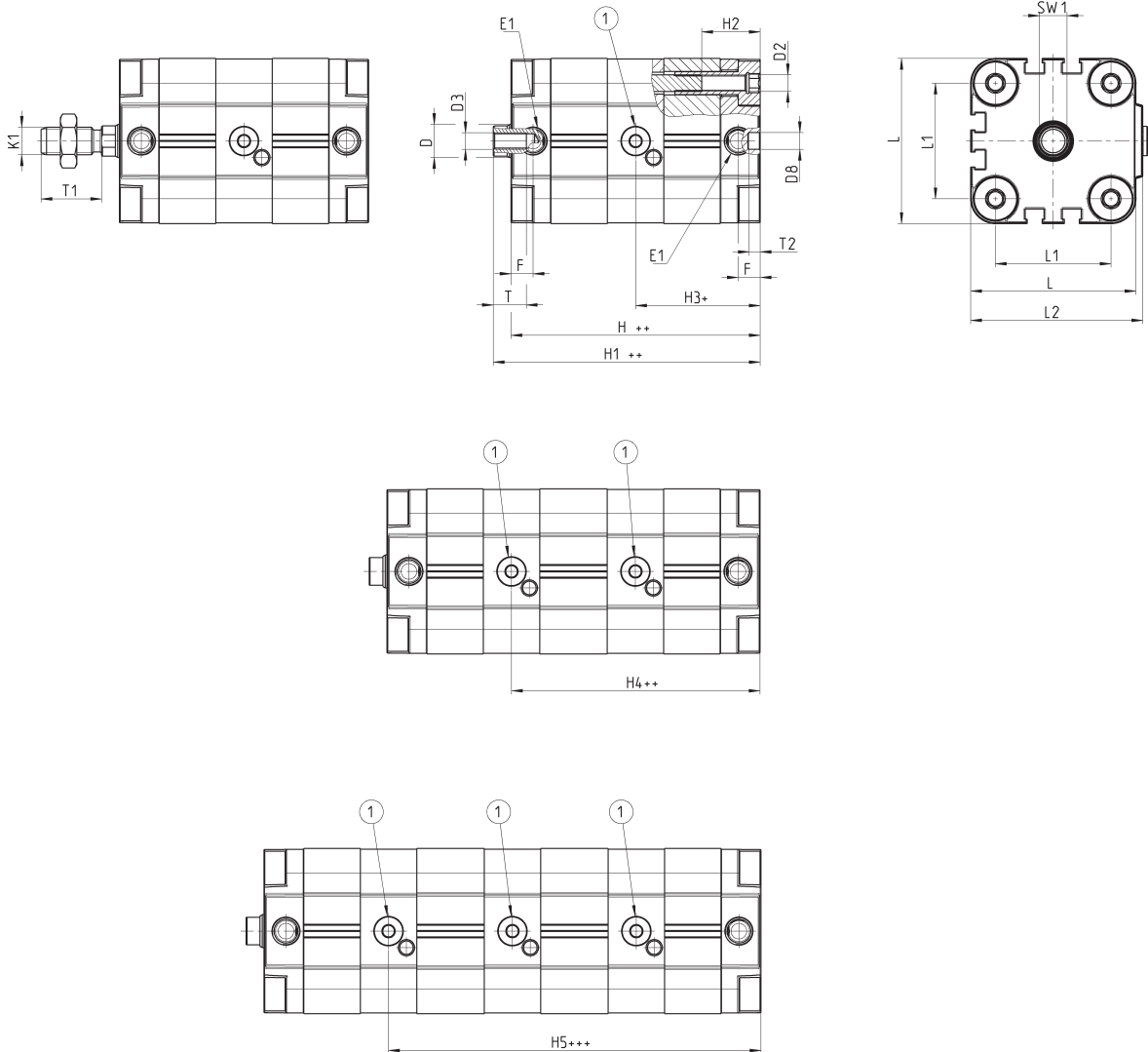
Tandem
Example for ordering:
stroke 25 mm
31M2A032A025N2 (2 stages)

Cylinders Series 31 - Tandem version

Mod. 31F2A...N...
Mod. 31M2A...N...



+ = add the stroke once
 ++ = add the stroke twice
 +++ = add the stroke three times
 ++++ = add the stroke four times
 (1) = air inlet cylinders ø12, 16, 20, 25



| DIMENSIONS | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----|-----|-----|-----|------|------|-------|-------|------|------|-------|-------|----------|-----|-----|------|----|----|----|-----|----------------------|-----------------------|-----------------------|-----------------------|--|
| ∅ | ∅D | D2 | D3 | ∅D8 | E1 | F | H++ | H1++ | H2 | H3+ | H4++ | H5+++ | K1 | L | L1 | L2 | T | T1 | T2 | SW1 | 3ST _{H1+++} | 3ST _{H1+...} | 4ST _{H1+...} | 4ST _{H1+...} | |
| 12 | 6 | M4 | M3 | 6 | M5 | 8 | 63,5 | 68 | 12,5 | 34,5 | 60 | 85,5 | M6 | 29 | 18 | 30 | 6 | 16 | 4 | 5 | 89 | 93,5 | 114,5 | 119 | |
| 16 | 8 | M4 | M4 | 6 | M5 | 8 | 63,5 | 68 | 12,5 | 34,5 | 60,5 | 86,5 | M8 | 29 | 18 | 30 | 8 | 20 | 4 | 7 | 89,5 | 94 | 115,5 | 120 | |
| 20 | 10 | M5 | M5 | 6 | M5 | 8 | 78 | 82,5 | 17 | 43,5 | 83,5 | 123,5 | M10x1,25 | 36 | 22 | 37,5 | 10 | 22 | 4 | 8 | 118 | 122,5 | 158 | 162,5 | |
| 25 | 10 | M5 | M5 | 6 | M5 | 8 | 78 | 83,5 | 17 | 43,5 | 83,5 | 123,5 | M10x1,25 | 40 | 26 | 41,5 | 10 | 22 | 4 | 8 | 117 | 122,5 | 156 | 161,5 | |
| 32 | 12 | M6 | M6 | 6 | G1/8 | 8 | 90,5 | 96,5 | 21,5 | 46,5 | 92,6 | 138,7 | M10x1,25 | 50 | 32 | 52 | 12 | 22 | 4 | 10 | 136,5 | 142,5 | 182,5 | 188,5 | |
| 40 | 12 | M6 | M6 | 6 | G1/8 | 8 | 90,5 | 97 | 21,5 | 46,5 | 90,2 | 135,2 | M10x1,25 | 60 | 42 | 62,5 | 12 | 22 | 4 | 10 | 135,5 | 142 | 180,5 | 187 | |
| 50 | 16 | M8 | M8 | 6 | G1/8 | 8 | 90,5 | 98 | 18 | 47,5 | 92,5 | 137,5 | M12x1,25 | 68 | 50 | 71 | 12 | 24 | 4 | 13 | 135,5 | 143 | 180 | 188 | |
| 63 | 16 | M10 | M8 | 8 | G1/8 | 8 | 100,5 | 108 | 26 | 50,2 | 100,7 | 151,2 | M12x1,25 | 87 | 62 | 91 | 12 | 24 | 4 | 13 | 151 | 158,5 | 201,5 | 209 | |
| 80 | 20 | M10 | M10 | 8 | G1/8 | 8,5 | 112 | 120 | 26,5 | 59 | 115 | 171 | M16x1,5 | 107 | 82 | 111 | 16 | 32 | 4 | 17 | 168 | 176 | 224 | 232 | |
| 100 | 25 | M10 | M12 | 8 | G1/4 | 10,5 | 135,5 | 145,5 | 26,5 | 71,3 | 140,4 | 209,5 | M20x1,5 | 128 | 103 | 133 | 20 | 40 | 4 | 22 | 204,5 | 214,5 | 237,5 | 283,5 | |

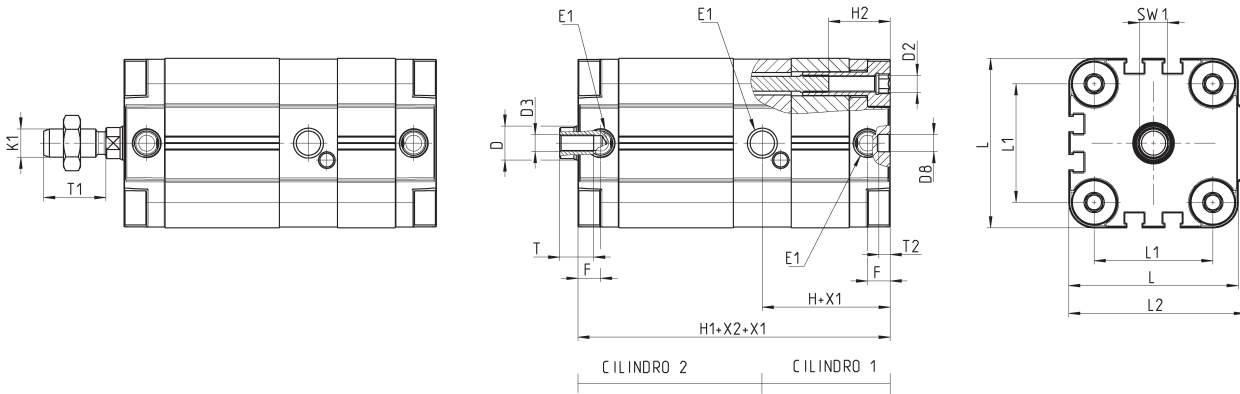
Cylinders Series 31 - multi-position version

Mod. 31F2A...X1-X2N
Mod. 31M2A...X1-X2N



X1 = stroke of stage 1
X2 = total stroke of application scheme
+ = add the stroke

SERIES 31 CYLINDERS - TANDEM AND MULTI-POSITION



| DIMENSIONS | | | | | | | | | | | | | | | | | |
|------------|----|-----|-----|-----|------|------|------|----------|------|----------|-----|-----|------|----|----|----|-----|
| ∅ | ∅D | D2 | D3 | ∅D8 | E1 | F | H+x1 | H1+x2+x1 | H2 | K1 | L | L1 | L2 | T | T1 | T2 | SW1 |
| 12 | 6 | M4 | M3 | 6 | M5 | 8 | 34,5 | 63,5 | 12,5 | M6 | 29 | 18 | 30 | 6 | 16 | 4 | 5 |
| 16 | 8 | M4 | M4 | 6 | M5 | 8 | 34,5 | 63,5 | 12,5 | M8 | 29 | 18 | 30 | 8 | 20 | 4 | 7 |
| 20 | 10 | M5 | M5 | 6 | M5 | 8 | 43,5 | 78 | 17 | M10x1,25 | 36 | 22 | 37,5 | 10 | 22 | 4 | 8 |
| 25 | 10 | M5 | M5 | 6 | M5 | 8 | 39,1 | 78 | 17 | M10x1,25 | 40 | 26 | 41,5 | 10 | 22 | 4 | 8 |
| 32 | 12 | M6 | M6 | 6 | G1/8 | 8 | 46,5 | 90,5 | 21,5 | M10x1,25 | 50 | 32 | 52 | 12 | 22 | 4 | 10 |
| 40 | 12 | M6 | M6 | 6 | G1/8 | 8 | 45 | 90,5 | 21,5 | M10x1,25 | 60 | 42 | 62,5 | 12 | 22 | 4 | 10 |
| 50 | 16 | M8 | M8 | 6 | G1/8 | 8 | 47 | 90,5 | 18 | M12x1,25 | 68 | 50 | 71 | 12 | 24 | 4 | 13 |
| 63 | 16 | M10 | M8 | 8 | G1/8 | 8 | 50 | 100,5 | 26 | M12x1,25 | 87 | 62 | 91 | 12 | 24 | 4 | 13 |
| 80 | 20 | M10 | M10 | 8 | G1/8 | 8,5 | 59 | 112 | 26,5 | M16x1,5 | 107 | 82 | 111 | 16 | 32 | 4 | 17 |
| 100 | 25 | M10 | M12 | 8 | G1/4 | 10,5 | 71 | 135,5 | 26,5 | M20x1,5 | 128 | 103 | 133 | 20 | 40 | 4 | 22 |