

# Series 31 compact cylinders, 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**

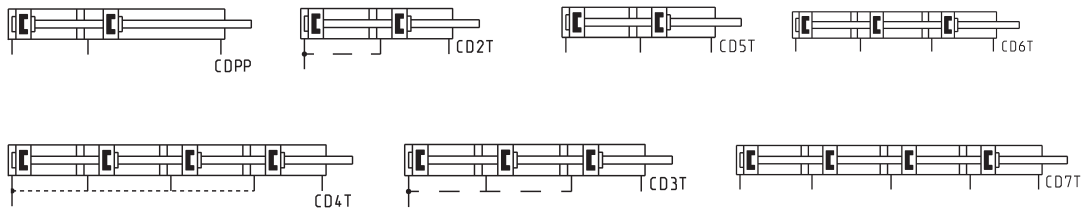
<b>31</b>	<b>M</b>	<b>2</b>	<b>A</b>	<b>032</b>	<b>A</b>	<b>050</b>	<b>N</b>	<b>2</b>
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<b>31</b>	SERIES	
<b>M</b>	VERSION M = male rod thread, mounted with rod nut Mod. U F = female rod thread	
<b>2</b>	OPERATION 2 = double-acting	PNEUMATIC SYMBOLS CDPP
<b>A</b>	MATERIALS A = rolled stainless steel rod AISI 303 - AL tube profile	
<b>032</b>	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
<b>A</b>	CONSTRUCTION TYPE A = standard	
<b>050</b>	STROKE - tandem stroke (mm) - multi-position X1mm/X2mm. Insert stroke without the initial 0 (see application scheme).	
<b>N</b>	TANDEM AND MULTI-POSITION	
<b>2</b>	STAGES (only for tandem) 2 = 2 stages - 3 = 3 stages - 4 = 4 stages	

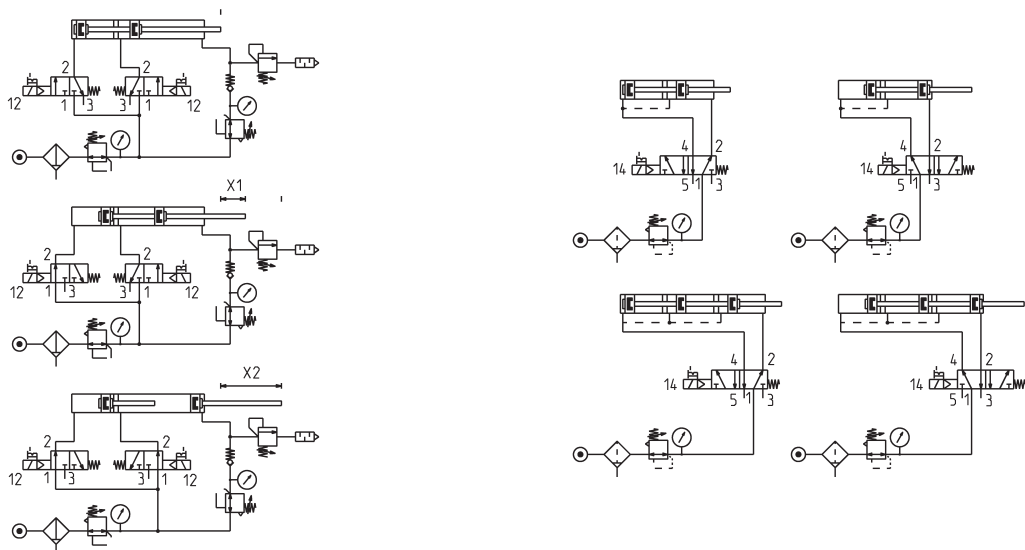
SERIES 31 CYLINDERS - TANDEM AND MULTI-POSITION

**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

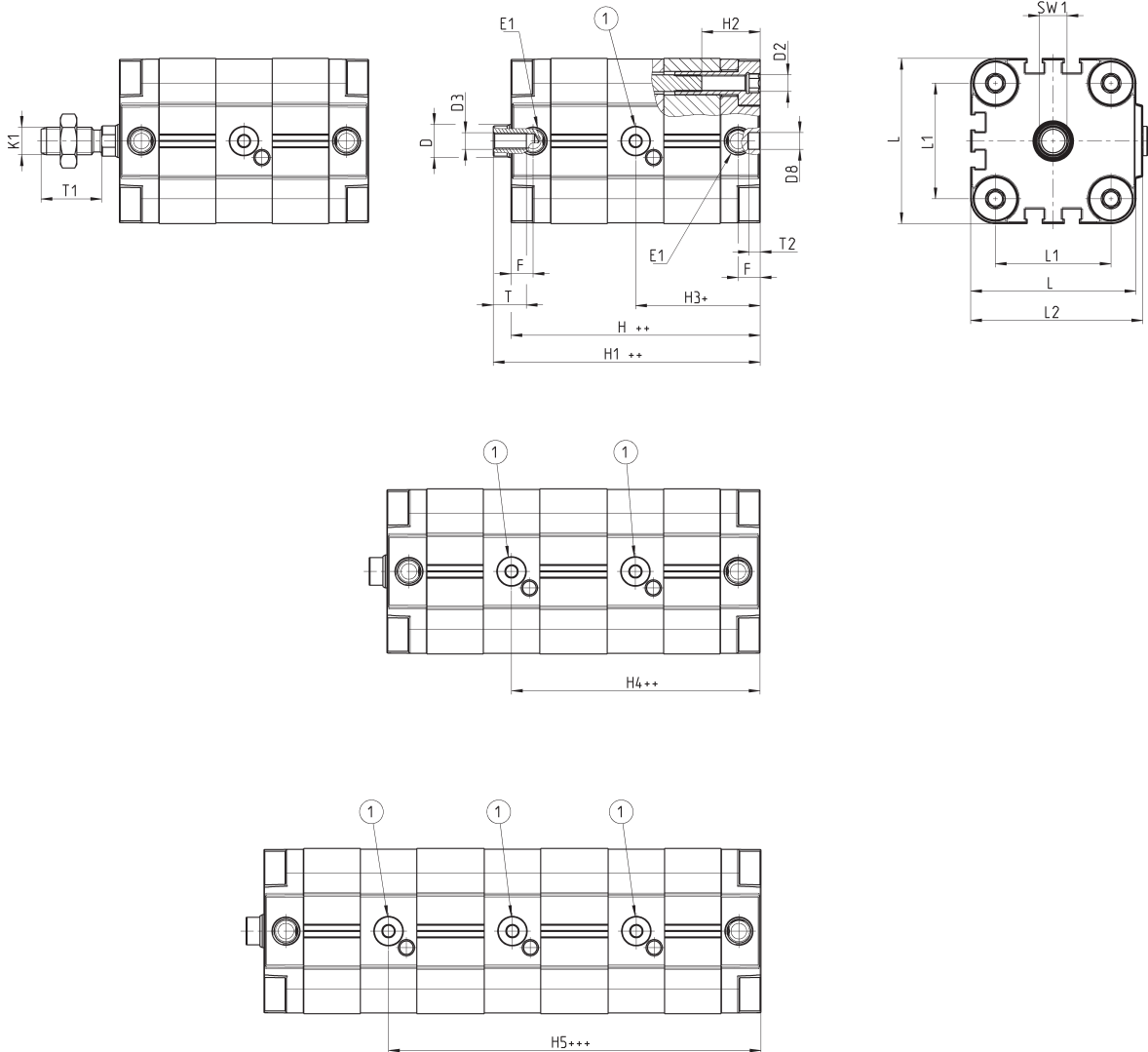
**Tandem**  
Example for ordering:  
stroke 25 mm  
31M2A032A025N2 (2 stages)

## 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  
 = air inlet cylinders ø12, 16, 20, 25



DIMENSIONS																									
Ø	øD	D2	D3	øD8	E1	F	H++	H1++	H2	H3+	H4++	H5+++	K1	L	L1	L2	T	T1	T2	SW1	3ST. <sub>H1+++</sub>	3ST. <sub>H1+...</sub>	4ST. <sub>H1+...</sub>	4ST. <sub>H1+...</sub>	
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	

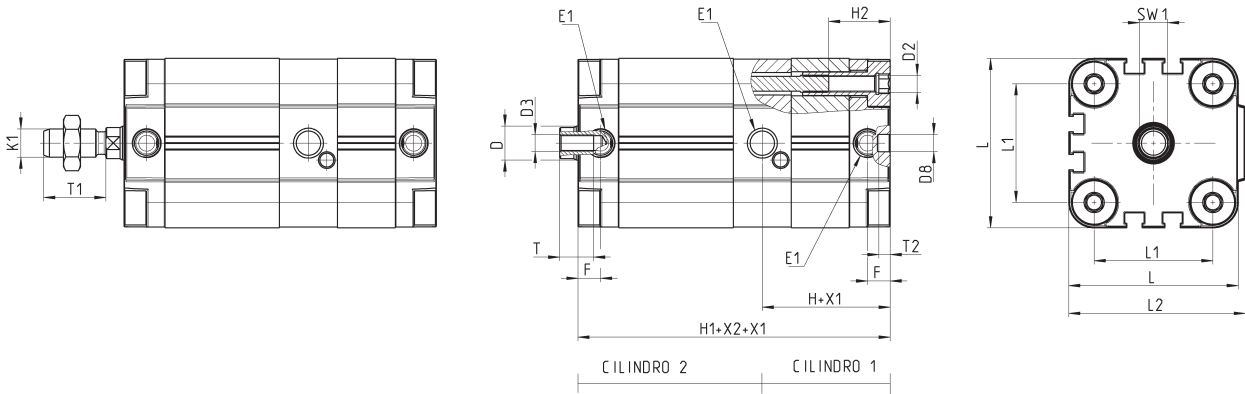
**Cylinders Series 31 - multi-position version**

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