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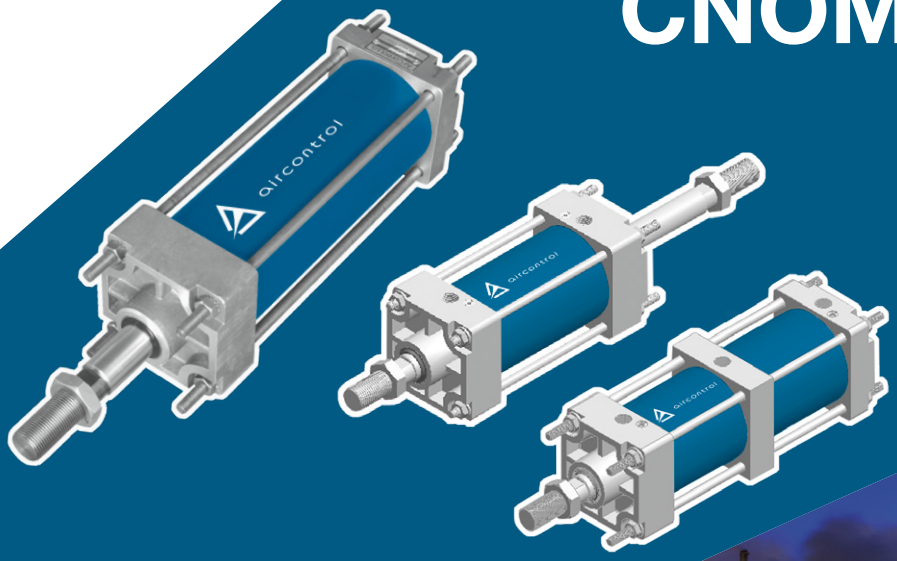
CNOMO Cylinders
& variations



aircontrol
www.aircontrol.es

Lifelong

1962... We have already been manufacturing pneumatic cylinders for half a century now. We can say that this is a lifetime's work. Time flies, as does innovation, and we never tire of manufacturing pneumatic cylinders and continuously improving our products; it's part of us, of our identity, impossible to erase. It's in our history, in our present and our future. We are "the cylinder company".

We could give a boring speech to introduce our "lifelong" product, but we don't want to, nor need to. We all know that pneumatic cylinders exist and we know their basic functions; like all pneumatic cylinder manufacturers, we know how to make them. Some do it better than others, but we all know how to do it. It's like learning to ride a bike... or to swim. You learn it and never forget. Some go to the pool on occasions and dare to take a dip in the sea on their holidays. Others go further, driven by their passion for water... They swim deeper, they last longer under water, swim faster, in different styles and catch the waves that take them further... We are this last type of swimmer.

As we have explained before, the difference between one swimmer and the other lies particularly in their passion. That passion that we also have for the will to supply products of the best quality, for promoting what a "good service" really is... For achieving the recognition of our clients that makes us continue innovating and working with even more passion and motivation. Because it feels good when you are acknowledged for your good work. At the end of the day, it's yours... "lifelong".

AirControl, passion for cylinders...

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CNOMO cylinders

Variations

Technical information

Fluid

AirControl cylinders are designed to work with non-lubricated air, which means that the cylinder components are lubricated in order to guarantee a correct operation. If you decide to use lubricated air, it's important that the use is continuous, since this lubrication removes the one applied in the assembly phase.

Strokes

All strokes available upon request.

Parameters

Bore: inside diameter of the cylinder liner (mm)
Stroke: working travel (mm)
Working pressure: (bar)
Working temperature: (ºC)
Travel speed: (m/s)
Damping force: (Nm)
Air consumption: (nl/min)
Theoretical force: (N)

Working limits of standard cylinders

On occasions, the technical staff of projects raises the question of whether the chosen cylinder can work successfully at a certain speed and load. When the work of the cylinder is static (set, hold, etc.), the only problem is to estimate correctly the necessary force. Knowing both this figure and the available air pressure, we easily obtain the action of the cylinder. However, when the work of the cylinder is dynamic, you have to consider the acceleration force and the friction of the cylinder itself to determine the correct diameter. Having carried out the calculations and defined the cylinder model, you need to know if the power developed at the end of its stroke can be absorbed by the damping device and the components of the cylinder. The table on page 5 indicates the maximum value of this energy in kgm for each diameter of cushioned MS Series cylinders.

Ø	25	32	40	50	63	80	100	125	160	200	250	300
kgm	0.15	0.30	0.60	0.90	2.5	5	8	12	20	33	50	80

Example

Load	300 kg
Velocity	25 m/min = 0.4 m/s
Pressure	4 bar

Cylinder bore calculation

Section	$\frac{300}{4}$ = 75 cm² aprox. Ø 100 mm

Energy calculation

$E = {}^1/_2\ mv^2$

$E = \frac{300}{9.8}\ 0.4^2$

E = 15.3 x 0.16 = 2.45 kgm

Therefore, the chosen cylinder is valid, because the energy value is less than indicated in the table. As you can see, the presented example is simple and it concerns a cylinder working horizontally. If the cylinder works vertically or inclined, the calculations must be made with the formulas corresponding to the presented case studies.

Table of maximum forces allowed by the piston rod at traction and compression (buckling) in kg

Cylinder Ø	Piston rod Ø	Maximum forces at compression Travel in mm										Maximum tensile forces
		150	200	300	400	500	600	800	1000	1200	1500	
25-32	12		320	160	95	65	45	26				240
40-50	18			800	475	325	225	130	90			660
63-80	22				1010	710	490	300	200	140		1030
100-125	30					2600	1800	1040	720	500	320	1950
160-200	40						5900	3400	2250	1600	1050	3500
250-300	60						17650	9930	6360	4410	3580	9600

Table of CNOMO cylinder forces in kg

Air pressure in bar			2	3	4	5	6	7	8	9	10
Efficiency			0.60	0.70	0.75	0.80	0.80	0.85	0.90	0.95	0.95
Cylinder Ø	Section in cm²		Approximate dynamic forces of the cylinders in kg								
	Thrust	*Traction*									
25	5	3.7	6	10.5	15	20	24	30	36	42	47
32	8	7	9.5	17	24	32	39	48	58	67	76
40	12.5	10	15	26	38	50	60	75	88	106	119
50	20	17.5	24	42	60	80	96	120	144	170	190
63	31	27	37	65	93	124	147	185	223	263	295
80	50	46	60	105	150	200	240	300	360	425	475
100	78	71	94	164	234	312	375	468	561	663	741
125	123	116	148	258	369	492	590	737	885	1040	1165
160	201	189	241	422	603	804	965	1205	1445	1700	1905
200	314	302	380	660	940	1255	1510	1880	2260	2660	2980
250	490	462	590	1030	1470	1960	2400	2915	3530	4190	4655
300	706	678	845	1480	2120	2825	3390	4200	5080	6035	6700

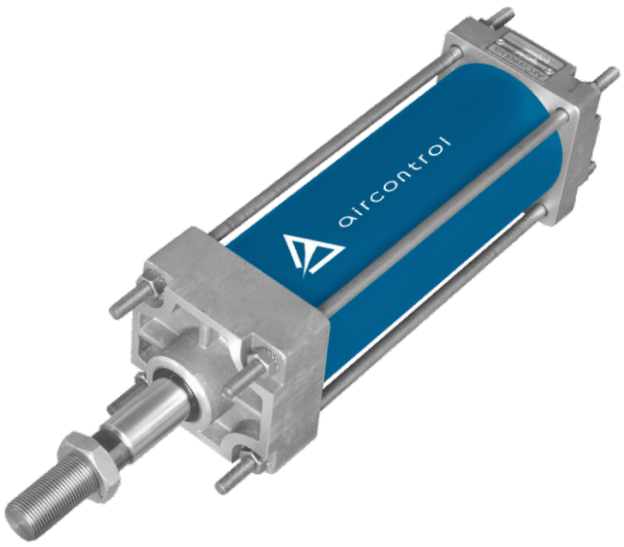
Table of free air consumption in litres per cm of stroke

Cylinder Ø	Air pressure in bar								
	1	2	3	4	5	6	7	8	9
25	0.015	0.019	0.024	0.029	0.033	0.038	0.043	0.048	0.052
32	0.023	0.031	0.039	0.047	0.054	0.062	0.069	0.078	0.085
40	0.037	0.049	0.061	0.073	0.085	0.097	0.110	0.121	0.134
50	0.057	0.076	0.095	0.114	0.133	0.152	0.171	0.190	0.210
63	0.091	0.122	0.152	0.182	0.212	0.242	0.273	0.303	0.333
80	0.147	0.196	0.245	0.294	0.342	0.391	0.440	0.488	0.507
100	0.230	0.306	0.382	0.459	0.534	0.610	0.686	0.763	0.839
125	0.360	0.479	0.598	0.717	0.835	0.954	1.073	1.192	1.310
160	0.590	0.785	0.980	1.175	1.370	1.565	1.760	1.950	2.150
200	0.920	1.225	1.530	1.830	2.165	2.440	2.740	3.050	3.350
250	1.440	1.910	2.390	2.860	3.340	3.810	4.280	4.760	5.230
300	2.100	2.750	3.440	4.120	4.800	5.480	6.170	6.850	7.540

MS Series
CNOMO cylinders

The MS series CNOMO cilindres consist of an aluminium or grounded and polished steel tube, in which the piston is fixed to the piston rod. The compressed air applies a pressure on the piston and consequently the movement of the assembly (piston and piston rod) is obtained. This assembly maintains its position thanks to two heads, the front head and the end head, which are fixed by tie rods. They are available with bores from 25 to 300 mm* and in any stroke. Most of the time, this assembly is completed with the fixing accessories required by the client.

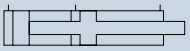
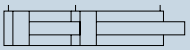
* The CNOMO standard includes diameters between 25 mm and 200 mm. We offer versions with diameters 250 mm and 300 mm as variations.



Codification

✶	✶	MS	✶✶✶	✶✶	✶✶✶✶	M

M	Magnetic	
A	Cushioned at both ends	
AD	Front cushioning	
AT	Rear cushioning	
N	Non cushioned	
Internal bore (mm)		
MS	Steel tube	
LS	Aluminium tube	
0	Standard cylinder	
2	Double opposite	
3	Tandem and three positions	
4	Through rod	
5	Bellows on the rod	
6	Adjustable stroke (without rear cushioning)	

Version	
-	
2	
3	
3	
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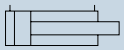
5	
6	

0	Without variations
1	Steel piston and cylinder heads + Chrome-plated tube
2	Steel piston and cylinder heads + High temperature (HT) seals
3	Steel piston and cylinder heads
4	Stainless steel piston rod
5	Chrome-plated tube + High temperature (HT) seals
6	Chrome-plated tube + Stainless steel piston rod
7	Chrome-plated tube
8	High temperature (HT) seals
9	Stainless steel piston rod + High temperature (HT) seals

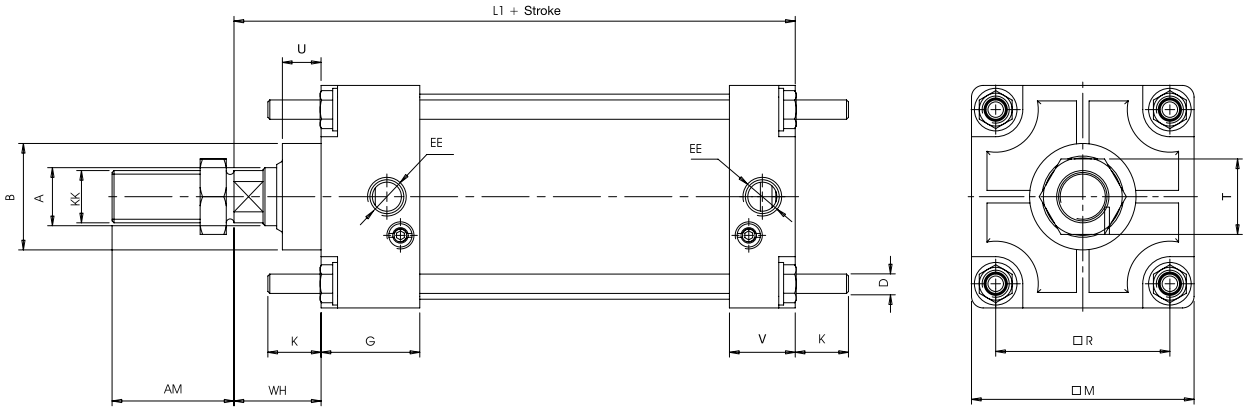
MS Series
CNOMO cylinders

Strokes

All strokes available according to the customer´s needs.

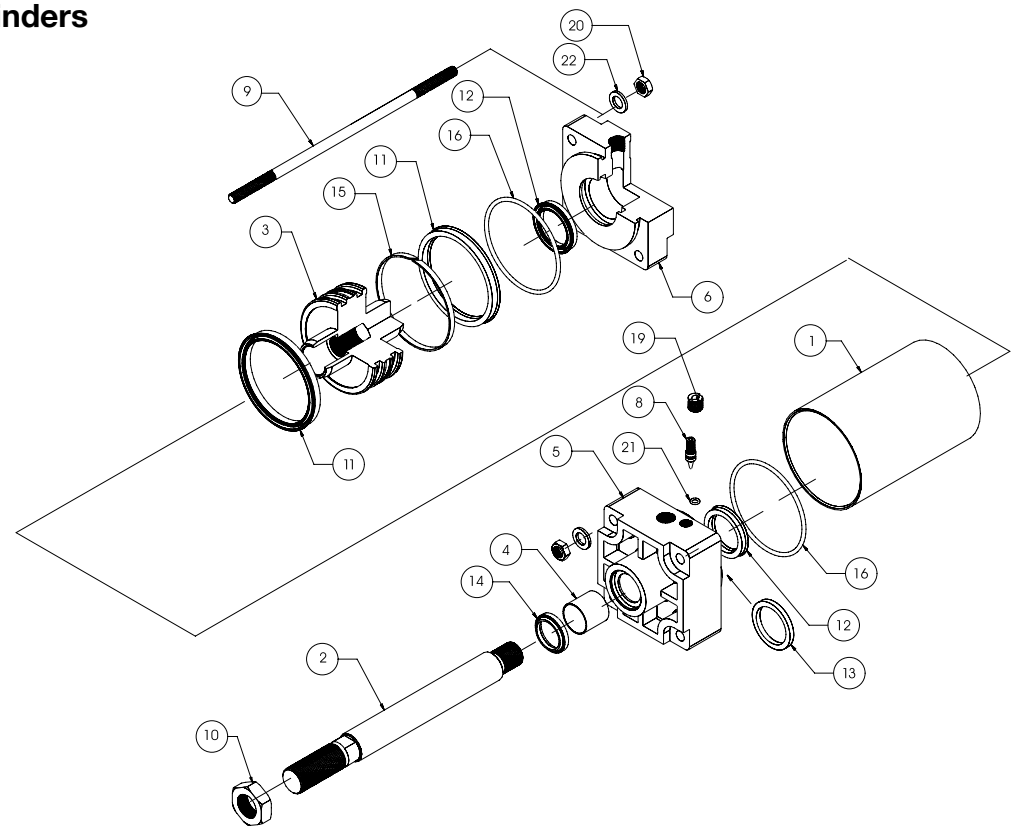
Technical specifications

Cylinder heads	Aluminium alloy (steel on request)
Piston rod	Rolled carbon steel, chrome-plated and rectified surface
Piston	Aluminium alloy (steel on request)
Tie rods	Zinc-plated steel
Liner	Steel (aluminium on request)
Seals	NBR (Viton for high temperatures)
Cushioning	Adjustable at both ends
Environmental temperature range	-10°C +80°C
Fluid temperature range	0°C +40°C (-30°C +200°C with Viton seals)
Lubrication	Required
Fluid	Filtered air
Maximum operating pressure	10 bar→
Forces	Technical information page
Air consumption	Technical information page



Ø	A	B	D	M	G	L1	R	AM	K	EE	KK	WH	S	V	T	U
25	12	25 e9	M6x1	40	27,5	105	28	20	17	1/8”	M. 10x1.5	25	5	18	17	15
32	12	25 e9	M6x1	45	28	105	33	20	17	1/8”	M. 10x1.5	25	5	18	17	15
40	18	32 e9	M6x1	52	38	144	40	36	17	1/4”	M. 16x1.5	34	8	24	24	15
50	18	32 e9	M8x1.25	65	38	144	49	36	23	1/4”	M. 16x1.5	34	8	24	24	15
63	22	45 e9	M8x1.25	75	43	164	59	46	23	3/8”	M. 20x1.5	39	10	28	30	20
80	22	45 e9	M10x1.5	95	43	164	75	46	28	3/8”	M. 20x1.5	39	10	28	30	20
100	30	55 e9	M10x1.5	115	51	192	90	63	28	1/2”	M. 27x2	47	13.5	34	41	20
125	30	55 e9	M12x1.75	140	51	192	110	63	34	1/2”	M. 27x2	47	13.5	34	41	20
160	40	65 e9	M16x2	180	62	230	140	85	42	3/4”	M. 36x2	50	18	40	54	25
200	40	65 e9	M16x2	220	62	230	175	85	42	3/4”	M. 36x2	50	18	40	54	25
250	60	92 e9	M20x2.5	270	50	309	208	70	57	1”	M. 50x3	78	20	50	75	48
300	60	92 e9	M24x3	320	50	309	260	70	57	1”	M. 50x3	78	20	50	75	48

MS Series
CNOMO cylinders



Num.	Description	Units	Bore											
			025	032	040	050	063	080	100	125	160	200	250	300
1	Liner	1	27 02 XXXX	27 03 XXXX	27 04 XXXX	27 05 XXXX	27 06 XXXX	27 08 XXXX	27 10 XXXX	27 12 XXXX	27 16 XXXX	27 20 XXXX	27 25 XXXX	27 30 XXXX
2	Piston rod	1	28 02 XXXX	28 02 XXXX	28 04 XXXX	28 04 XXXX	28 06 XXXX	28 06 XXXX	28 10 XXXX	28 10 XXXX	28 16 XXXX	28 16 XXXX	28 25 XXXX	28 25 XXXX
3	Piston	1	26 02 03M	26 03 03M	26 04 03M	26 05 03M	26 06 03M	26 08 03M	26 10 03M	26 12 03M	26 16 03M	26 20 03M	26 25 03M	26 30 03M
4	Guide bush	1	26 02 04	26 02 04	26 04 04	26 04 04	26 06 04	26 06 04	26 10 04	26 10 04	26 16 04	26 16 04	26 25 04	26 25 04
5	Front cylinder head	1	26 02 05	26 03 05	26 04 05	26 05 05	26 06 05	26 08 05	26 10 05	26 12 05	26 16 05	26 20 05	26 25 05	26 30 05
6	Rear cylinder head	1	26 02 06	26 03 06	26 04 06	26 05 06	26 06 06	26 08 06	26 10 06	26 12 06	26 16 06	26 20 06	26 25 06	26 30 06
7	Front cushioning bush**	1	-	-	-	-	-	-	-	-	-	-	26 25 07	26 25 07
7A	Rear cushioning bush**	1	-	-	-	-	-	-	-	-	-	-	26 25 18	26 25 18
8	Regulator	2	26 02 08	26 02 08	26 02 08	26 05 08	26 05 08	26 05 08	26 10 08	26 10 08	26 10 08	26 10 08	26 10 08	26 10 08
9	Tie rod	4	29 02 XXXX	29 02 XXXX	29 04 XXXX	29 05 XXXX	29 06 XXXX	29 08 XXXX	29 10 XXXX	29 12 XXXX	29 16 XXXX	29 16 XXXX	29 25 XXXX	29 30 XXXX
10	Locknut	1	26 02 10	26 02 10	26 04 10	26 04 10	26 06 10	26 06 10	26 10 10	26 10 10	26 16 10	26 16 10	26 25 10	26 25 10
*11	Collar	2	-	-	-	-	-	-	-	-	-	-	-	-
*12	Cushioning seal	2	-	-	-	-	-	-	-	-	-	-	-	-
*13	Collar	1	-	-	-	-	-	-	-	-	-	-	-	-
*14	Piston rod scraper	1	-	-	-	-	-	-	-	-	-	-	-	-
*15	Slipping segment	1	-	-	-	-	-	-	-	-	-	-	-	-
*16	O-Ring	2	-	-	-	-	-	-	-	-	-	-	-	-
17	O-Ring**	1	-	-	-	-	-	-	-	-	-	-	26 25 17	26 25 17
19	Regulation nut	2	-	-	-	26 05 19	26 05 19	26 05 19	26 10 19	26 10 19	26 10 19	26 10 19	26 10 19	26 10 19
20	Bichromated nut	8	26 02 20	26 02 20	26 02 20	26 05 20	26 05 20	26 08 20	26 08 20	26 12 20	26 16 20	26 16 20	26 25 20	26 30 20
21	O-Ring	2	-	-	-	-	-	-	-	-	-	-	-	-
22	Serrated washer	8	-	-	-	-	-	26 08 22	26 08 22	26 12 22	26 16 22	26 16 22	26 25 22	26 30 22

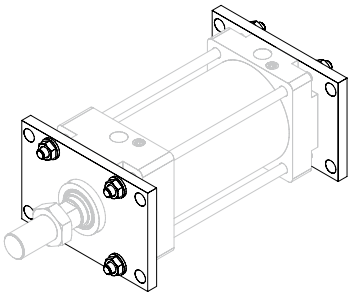
* Spare kit components

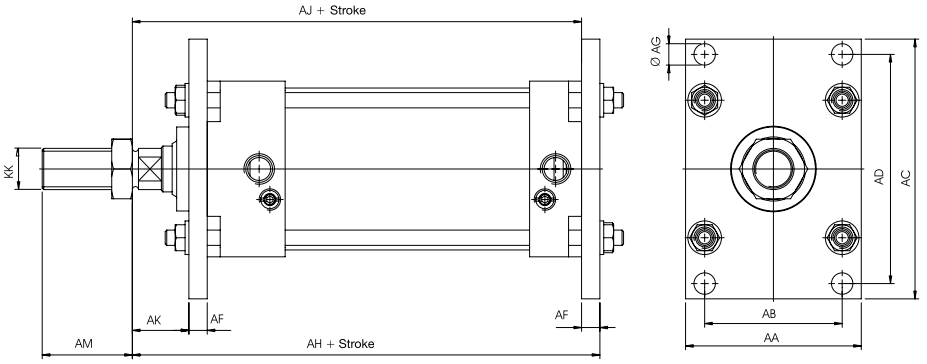
** On the models with bore sizes 250 mm y 300 mm, the piston is divided into a front (7) and rear (7A) cushioning bush + O-Ring (17).

Spare kit	025	032	040	050	063	080	100	125	160	200	250	300
Standard	26 02 30	26 03 30	26 04 30	26 05 30	26 06 30	26 08 30	26 10 30	26 12 30	26 16 30	26 20 30	26 25 30	26 30 30
High temperature (HT)	80 26 02 30	80 26 03 30	80 26 04 30	80 26 05 30	80 26 06 30	80 26 08 30	80 26 10 30	80 26 12 30	80 26 16 30	80 26 20 30	80 26 25 30	80 26 30 30

MS Series
CNOMO cylinders
Fixing elements

Flange

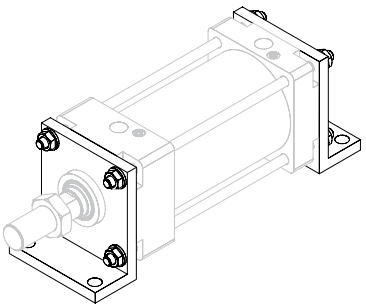


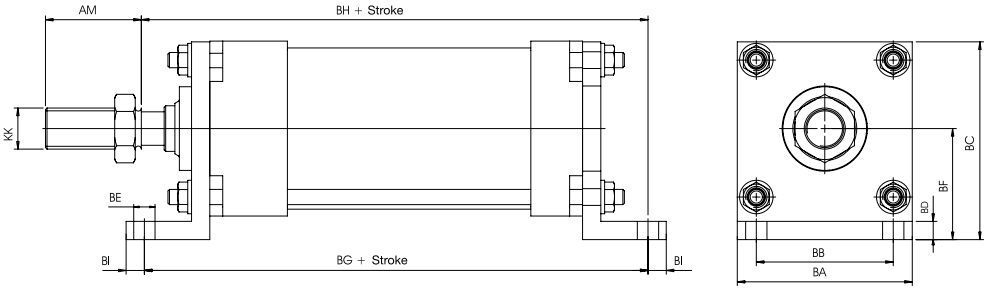


Ø	AA	AB	AC	AD	AF	AG	AH	AJ	AK	AM	KK
25	40	28	80	68	8	9	113	105	17	20	M. 10x1.5
32	45	33	80	68	8	9	113	105	17	20	M. 10x1.5
40	52	40	90	78	8	9	152	144	26	36	M. 16x1.5
50	65	49	110	94	10	11	154	144	24	36	M. 16x1.5
63	75	59	120	104	10	11	174	164	29	46	M. 20x1.5
80	95	75	150	130	12	14	176	164	27	46	M. 20x1.5
100	115	90	170	150	12	14	204	192	35	63	M. 27x2
125	140	110	205	180	16	18	208	192	31	63	M. 27x2
160	180	140	260	228	20	22	250	230	30	85	M. 36x2
200	220	175	300	268	20	22	250	230	30	85	M. 36x2
250	270	208	360	315	25	24	334	309	53	70	M. 50x3
300	320	260	430	375	30	26	339	309	48	70	M. 50x3

COD.	Ø
B25 02 04	25
B25 03 04	32
B25 04 04	40
B25 05 04	50
B25 06 04	63
B25 08 04	80
B25 10 04	100
B25 12 04	125
B25 16 04	160
B25 20 04	200
B25 25 04	250
B25 30 04	300

Large Feet Bracket



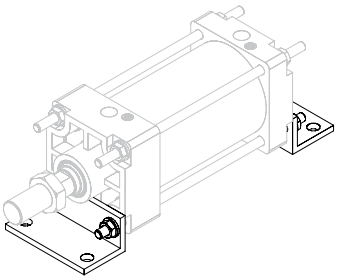


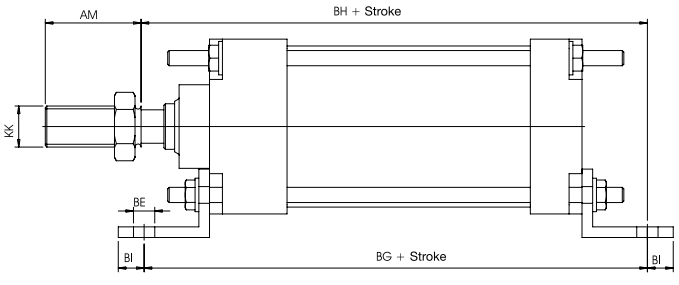
Ø	BA	BB	BC	BD	BE	BF	BG	BH	BI	AM	KK
25	40	24	50	8	9	30	134	132	8	20	M. 10x1.5
32	45	28	54	8	9	32	134	132	8	20	M. 10x1.5
40	52	36	62	8	9	36	164	171	8	36	M. 16x1.5
50	65	45	77	10	11	45	180	179	10	36	M. 16x1.5
63	75	55	87	10	11	50	195	199	10	46	M. 20x1.5
80	95	70	110	12	14	63	211	207	12	46	M. 20x1.5
100	115	90	130	12	14	73	231	235	12	63	M. 27x2
125	140	100	161	16	18	91	249	244	16	63	M. 27x2
160	180	130	205	20	22	115	304	292	18	85	M. 36x2
200	220	170	245	20	22	135	304	292	18	85	M. 36x2
250	270	220	300	32	22	165	421	404	25	70	M. 50x3
300	320	270	350	32	26	190	421	404	25	70	M. 50x3

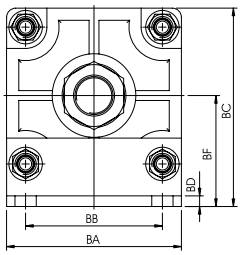
COD.	Ø
B25 02 05	25
B25 03 05	32
B25 04 05	40
B25 05 05	50
B25 06 05	63
B25 08 05	80
B25 10 05	100
B25 12 05	125
B25 16 05	160
B25 20 05	200
B25 25 05	250
B25 30 05	300

MS Series
CNOMO cylinders
Fixing elements

Short Feet Bracket



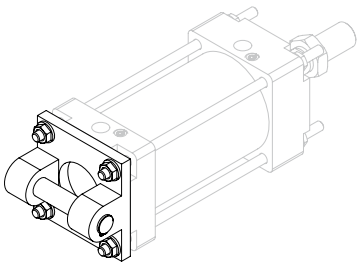


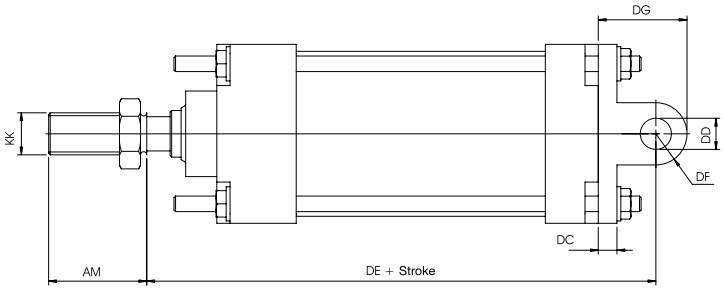


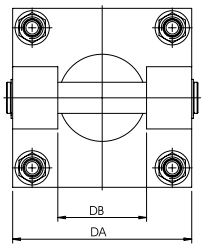
Ø	BA	BB	BC	BD	BE	BF	BG	BH	BI	AM	KK
25	40	24	50	5	9	30	134	132	8	20	M. 10x1.5
32	45	28	54	5	9	32	134	132	8	20	M. 10x1.5
40	52	36	62	5	9	36	164	171	8	36	M. 16x1.5
50	65	45	77	6	11	45	180	179	10	36	M. 16x1.5
63	75	55	87	6	11	50	195	199	10	46	M. 20x1.5
80	95	70	110	7	14	63	211	207	17	46	M. 20x1.5
100	115	90	130	7	14	73	231	235	17	63	M. 27x2
125	140	100	161	8	18	91	249	244	18	63	M. 27x2
160	180	130	205	10	22	115	304	292	18	85	M. 36x2
200	220	170	245	10	22	135	304	292	18	85	M. 36x2
250	Please contact our Technical Office										
300	Please contact our Technical Office										

COD.	Ø
B25 02 07	25
B25 03 07	32
B25 04 07	40
B25 05 07	50
B25 06 07	63
B25 08 07	80
B25 10 07	100
B25 12 07	125
B25 16 07	160
B25 20 07	200

Female Hinge





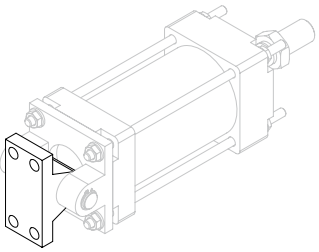


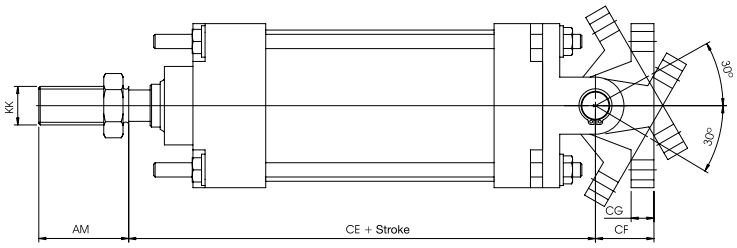
Ø	DA	DB	DC	DD	DE	DF	DG	AM	KK
25	40	26	8	8	123	8	26	20	M. 10x1.5
32	45	26	8	8	123	8	26	20	M. 10x1.5
40	52	33	8	12	168	12	36	36	M. 16x1.5
50	65	33	10	12	170	12	38	36	M. 16x1.5
63	75	47	10	16	194	16	46	46	M. 20x1.5
80	95	47	12	16	196	16	48	46	M. 20x1.5
100	115	57	12	20	229	20	57	63	M. 27x2
125	140	57	16	20	233	20	61	63	M. 27x2
160	180	72	20	25	285	25	80	85	M. 36x2
200	220	72	20	25	285	25	80	85	M. 36x2
250	270	132	32	40	389	43	123	70	M. 50x3
300	320	132	32	40	389	43	123	70	M. 50x3

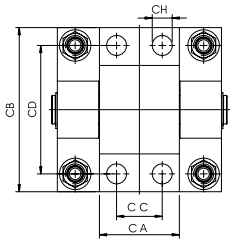
COD.	Ø
B25 02 09	25
B25 03 09	32
B25 04 09	40
B25 05 09	50
B25 06 09	63
B25 08 09	80
B25 10 09	100
B25 12 09	125
B25 16 09	160
B25 20 09	200
B25 25 09	250
B25 30 09	300

MS Series
CNOMO cylinders
Fixing elements

Male Hinge



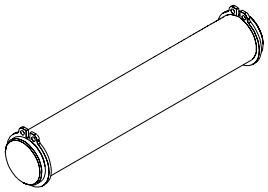




Ø	CA	CB	CC	CD	CE	CF	CG	CH	AM	KK
25	25	40	-	28	123	18	8	7	20	M. 10x1.5
32	25	40	-	28	123	18	8	7	20	M. 10x1.5
40	32	52	16	38	168	26	10	9	36	M. 16x1.5
50	32	52	16	38	170	26	10	9	36	M. 16x1.5
63	46	75	25	54	194	34	12	11	46	M. 20x1.5
80	46	75	25	54	196	34	12	11	46	M. 20x1.5
100	56	115	32	90	229	41	16	14	63	M. 27x2
125	56	115	32	90	233	41	16	14	63	M. 27x2
160	71	180	43	150	285	55	20	18	85	M. 36x2
200	71	180	43	150	285	55	20	18	85	M. 36x2
250	131	190	90	150	389	80	23	22	70	M. 50x3
300	131	190	90	150	389	80	23	22	70	M. 50x3

COD.	Ø
B25 02 10	25
B25 02 10	32
B25 04 10	40
B25 04 10	50
B25 06 10	63
B25 06 10	80
B25 10 10	100
B25 10 10	125
B25 16 10	160
B25 16 10	200
B25 25 10	250
B25 25 10	300

Pivot for Female Hinge



Ø	A	B
25	47.5	8
32	52.5	8
40	60.5	12
50	73.5	12
63	83.5	16
80	103	16
100	123	20
125	148	20
160	191	25
200	230	25
250	254	40
300	254	40

COD.	Ø
B25 02 20	25
B25 03 20	32
B25 04 20	40
B25 05 20	50
B25 06 20	63
B25 06 20	80
B25 10 20	100
B25 12 20	125
B25 16 20	160
B25 20 20	200
B25 25 20	250
B25 25 20	300

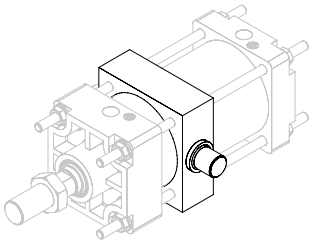
Pivot for Female Yoke

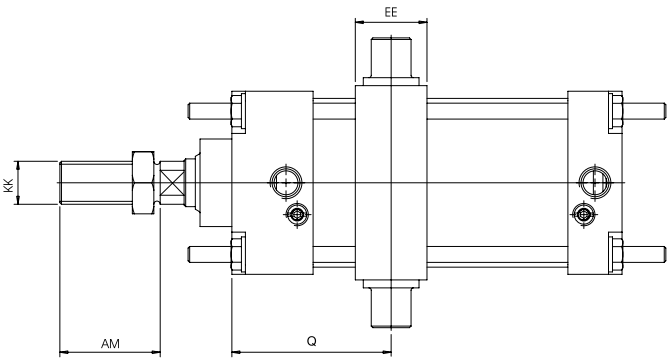
Ø	A	B
25	29.5	8
32	29.5	8
40	44.5	12
50	44.5	12
63	53.5	16
80	53.5	16
100	73	20
125	73	20
160	91	25
200	91	25
250	91	40
300	91	40

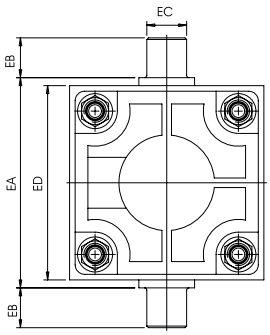
COD.	Ø
B25 02 21	25
B25 02 21	32
B25 04 21	40
B25 04 21	50
B25 06 21	63
B25 06 21	80
B25 10 21	100
B25 10 21	125
B25 16 21	160
B25 16 21	200
B25 25 21	250
B25 25 21	300

MS Series
CNOMO cylinders
Fixing elements

Intermediate Hinge



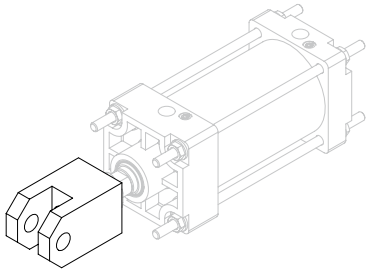


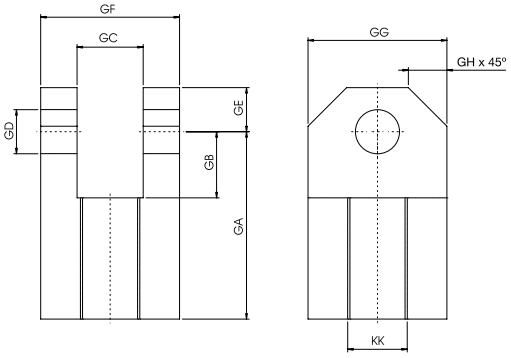


Ø	EA	EB	Ø EC	ED	EE	Q minimum	AM	KK
25	42	12	12	38	22	38.5	20	M. 10x1.5
32	50	12	12	46	22	39	20	M. 10x1.5
40	63	16	16	58	30	53	36	M. 16x1.5
50	73	16	16	68	30	53	36	M. 16x1.5
63	90	20	20	84	35	60.5	46	M. 20x1.5
80	108	20	20	102	35	60.5	46	M. 20x1.5
100	131	25	25	124	40	71	63	M. 27x2
125	159	25	25	152	40	71	63	M. 27x2
160	198	32	32	190	50	87	85	M. 36x2
200	248	32	32	240	50	87	85	M. 36x2
250	306	45	45	296	65	82.5	70	M. 50x3
300	356	45	45	346	65	82.5	70	M. 50x3

COD.	Ø
B25 02 12	25
B25 03 12	32
B25 04 12	40
B25 05 12	50
B25 06 12	63
B25 08 12	80
B25 10 12	100
B25 12 12	125
B25 16 12	160
B25 20 12	200
B25 25 12	250
B25 30 12	300

Female Yoke



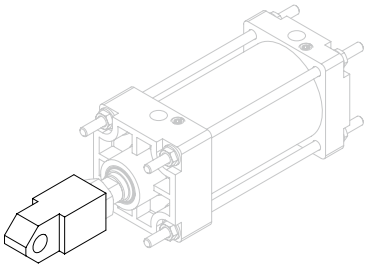


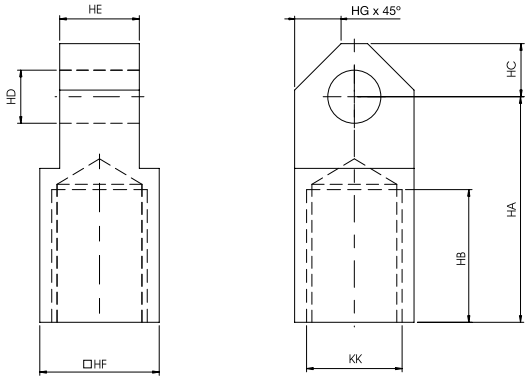
Ø	GA	GB	GC	GD	GE	GF	GG	GH	KK
25	36	16	11	8	9	22	22	6	M. 10x1.5
32	36	16	11	8	9	22	22	6	M. 10x1.5
40	51	19	18	12	13	36	36	10	M. 16x1.5
50	51	19	18	12	13	36	36	10	M. 16x1.5
63	63	23	22	16	17	45	45	12	M. 20x1.5
80	63	23	22	16	17	45	45	12	M. 20x1.5
100	85	30	30	20	20	63	63	17.5	M. 27x2
125	85	30	30	20	20	63	63	17.5	M. 27x2
160	115	40	40	25	25	80	80	20	M. 36x2
200	115	40	40	25	25	80	80	20	M. 36x2
250	115	50	40	40	40	80	80	20	M. 50x3
300	115	50	40	40	40	80	80	20	M. 50x3

COD.	Ø
B25 02 14	25
B25 02 14	32
B25 04 14	40
B25 04 14	50
B25 06 14	63
B25 06 14	80
B25 10 14	100
B25 10 14	125
B25 16 14	160
B25 16 14	200
B25 25 14	250
B25 25 14	300

MS Series
CNOMO cylinders
Fixing elements

Male Yoke (without Ball Joint)





Ø	HA	HB	HC	HD	HE	HF	HG	KK
25	36	20	9	8	11	22	6	M. 10x1.5
32	36	20	9	8	11	22	6	M. 10x1.5
40	51	30	13	12	18	32	10	M. 16x1.5
50	51	30	13	12	18	32	10	M. 16x1.5
63	63	36	17	16	22	36	12	M. 20x1.5
80	63	36	17	16	22	36	12	M. 20x1.5
100	85	50	20	20	30	45	17.5	M. 27x2
125	85	50	20	20	30	45	17.5	M. 27x2
160	115	70	25	25	40	63	20	M. 36x2
200	115	70	25	25	40	63	20	M. 36x2
250	115	65	40	40	40	70	20	M. 50x3
300	115	65	40	40	40	70	20	M. 50x3

COD.	Ø
B25 02 15	25
B25 02 15	32
B25 04 15	40
B25 04 15	50
B25 06 15	63
B25 06 15	80
B25 10 15	100
B25 10 15	125
B25 16 15	160
B25 16 15	200
B25 25 15	250
B25 25 15	300

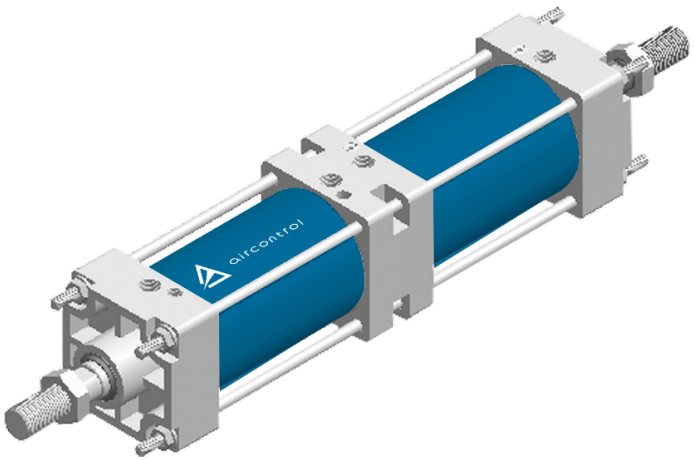
02MS Series

CNOMO cylinder variations

▶ Double opposite cylinders

This model is based on two standard CNOMO cylinders joined at the back and fixed by four unique tie rods. It can work independently or simultaneously, depending on the circuit control. The most usual applications are the opening and closing of doors, hoppers, etc.

The CNOMO standard does not include variations.

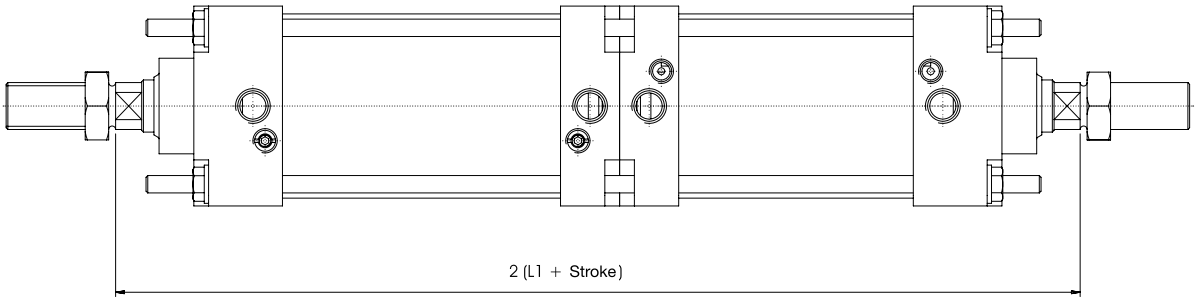


Ordering example

Double opposite cylinder Ø 100 mm - stroke 100 and 200 mm

02 MS 100 A 0100/0200

Version
2 



Ø	25	32	40	50	63	80	100	125	160	200	250	300
L1	105		144		164		192		230		309	

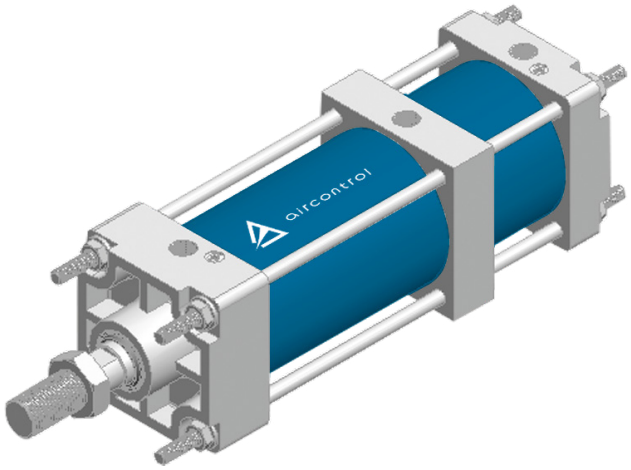
General information, codification, strokes and technical specifications on pages 6 and 7.

03MS Series
CNOMO cylinder variations

▶ Three position cylinders

This model is based on a combination of two single rod cylinders of a different stroke. The total stroke is obtained by a cylinder with fixed end positions, while the intermediate position is obtained by means of another cylinder with a shorter stroke. The most usual applications are the deflection of products on conveyor belts, the working of gate valves to obtain two fixed opening positions, etc. Cylinders with different bores are available to obtain different efforts on some positions.

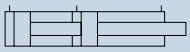
The CNOMO standard does not include variations.

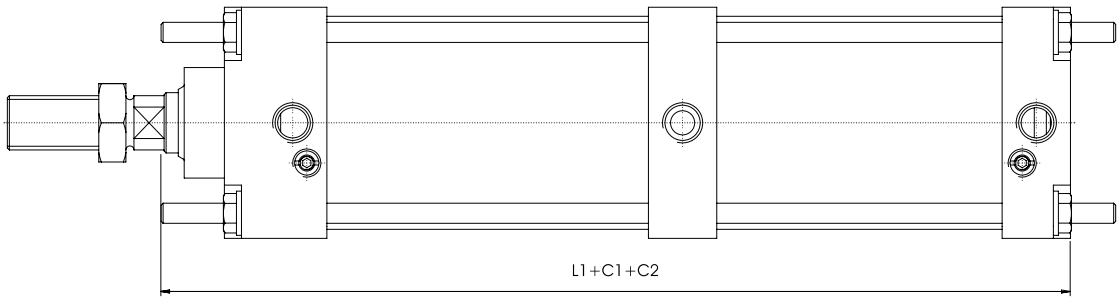


Ordering example

Three position cylinder Ø 63 mm - extreme position 75 mm - intermediate position 200 mm

03 MS 063 A 0075/0200

Version
3 



Ø	25	32	40	50	63	80	100	125	160	200
L1	172		221		252		293		355	

General information, codification, strokes and technical specifications on pages 6 and 7.

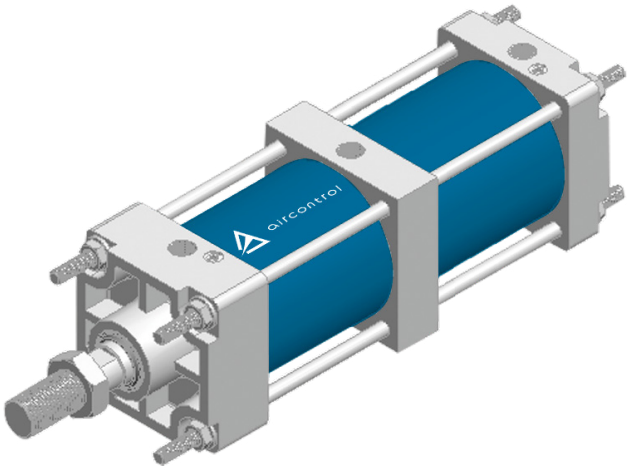
03MS Series

CNOMO cylinder variations

▶ Tandem cylinders

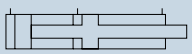
These tandem cylinders consist of two single rod cylinders with the same bore and stroke, axially joined, as with the three position cylinders. This model is essential in those cases where a certain force is needed, but at the same time exists a limited diametrical space. The pneumatic pressure must by applied at the same time on both inlets 1 and 2. In order to move the piston rod back to its original position, only inlet 3 is used. This functioning lessens the air consumption by half.

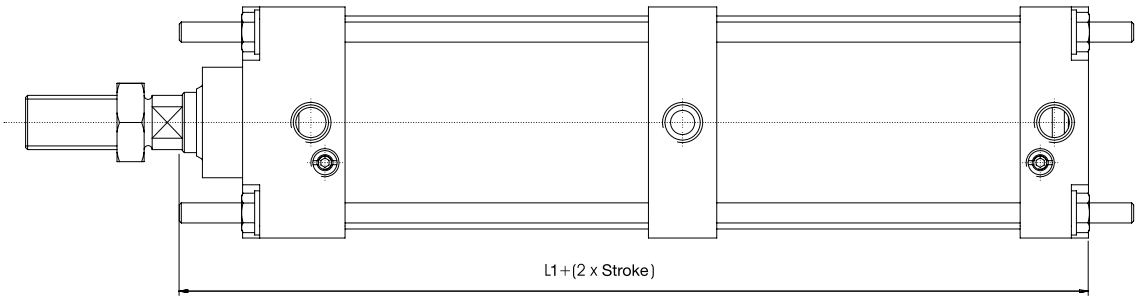
The CNOMO standard does not include variations.



Ordering example

Tandem cylinder Ø 80 mm - stroke 100 mm
03 MS 80 A 0100

Version
3 



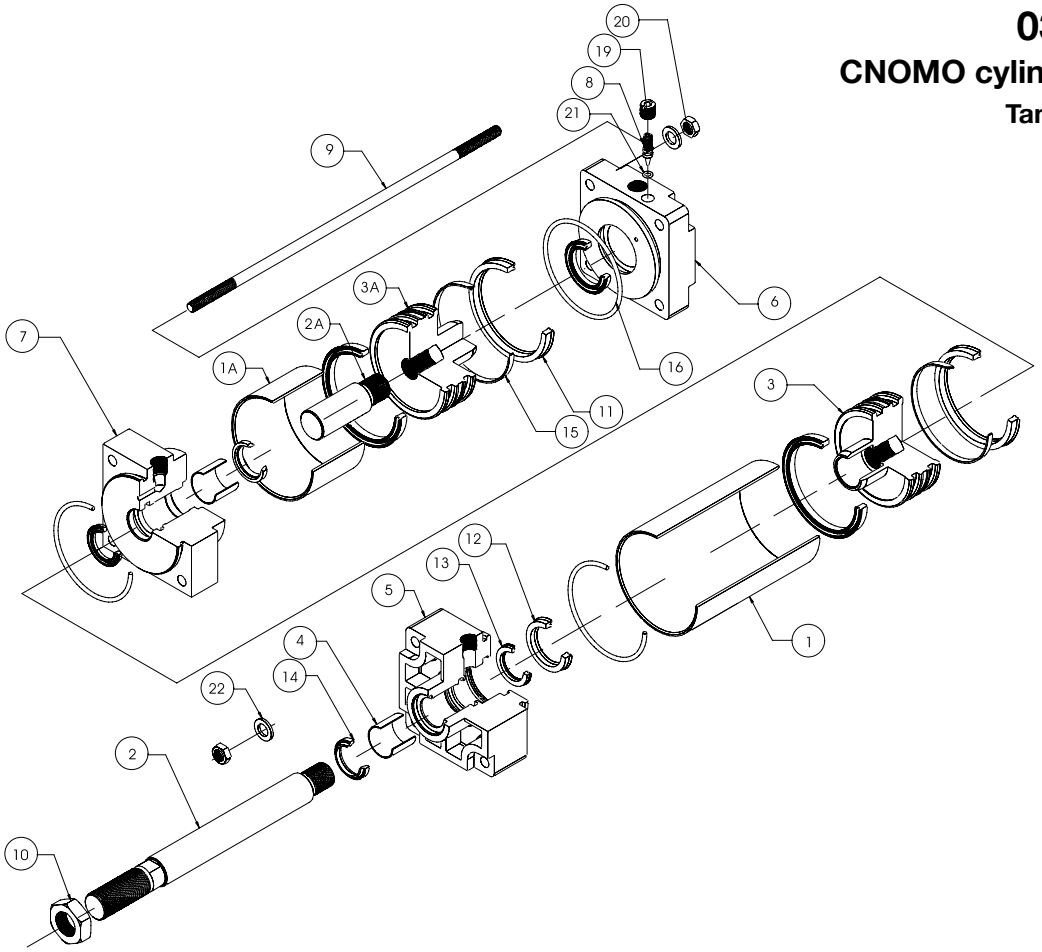
Ø	25	32	40	50	63	80	100	125	160	200
L1	172		221		252		293		355	

General information, codification, strokes and technical specifications on pages 6 and 7.

03MS Series

CNOMO cylinder variations

Tandem cylinders ◀



Num.	Description	Units	Bore									
			025	032	040	050	063	080	100	125	160	200
1	Front liner	1	27 02 XXXX	27 03 XXXX	27 04 XXXX	27 05 XXXX	27 06 XXXX	27 08 XXXX	27 10 XXXX	27 12 XXXX	27 16 XXXX	27 20 XXXX
1A	Rear liner	1	37 02 XXXX	37 03 XXXX	37 04 XXXX	37 05 XXXX	37 06 XXXX	37 08 XXXX	37 10 XXXX	37 12 XXXX	37 16 XXXX	37 20 XXXX
2	Front piston rod	1	28 02 XXXX	28 02 XXXX	28 04 XXXX	28 04 XXXX	28 06 XXXX	28 06 XXXX	28 10 XXXX	28 10 XXXX	28 16 XXXX	28 16 XXXX
2A	Rear piston rod	1	38 02 XXXX	38 02 XXXX	38 04 XXXX	38 04 XXXX	38 06 XXXX	38 06 XXXX	38 10 XXXX	38 10 XXXX	38 16 XXXX	38 16 XXXX
3	Front piston	1	26 02 33	26 03 33	26 04 33	26 05 33	26 06 33	26 08 33	26 10 33	26 12 33	26 16 33	26 20 33
3A	Rear piston	1	26 02 34	26 03 34	26 04 34	26 05 34	26 06 34	26 08 34	26 10 34	26 12 34	26 16 34	26 20 34
4	Guide bush	2	26 02 04	26 02 04	26 04 04	26 04 04	26 06 04	26 06 04	26 10 04	26 10 04	26 16 04	26 16 04
5	Front cylinder head	1	26 02 05	26 03 05	26 04 05	26 05 05	26 06 05	26 08 05	26 10 05	26 12 05	26 16 05	26 20 05
6	Rear cylinder head	1	26 02 06	26 03 06	26 04 06	26 05 06	26 06 06	26 08 06	26 10 06	26 12 06	26 16 06	26 20 06
7	Intermediate cylinder head	1	26 02 35	26 03 35	26 04 35	26 05 35	26 06 35	26 08 35	26 10 35	26 12 35	26 16 35	26 20 35
8	Regulator	2	26 02 08	26 02 08	26 02 08	26 05 08	26 05 08	26 05 08	26 10 08	26 10 08	26 10 08	26 10 08
9	Tie rod	4	39 02 XXXX	39 02 XXXX	39 04 XXXX	39 05 XXXX	39 06 XXXX	39 08 XXXX	39 10 XXXX	39 12 XXXX	39 16 XXXX	39 16 XXXX
10	Locknut	1	26 02 10	26 02 10	26 04 10	26 04 10	26 06 10	26 06 10	26 10 10	26 10 10	26 16 10	26 16 10
*11	Collar	4	-	-	-	-	-	-	-	-	-	-
*12	Cushioning seal	2	-	-	-	-	-	-	-	-	-	-
*13	Collar	2	-	-	-	-	-	-	-	-	-	-
*14	Piston rod scraper	2	-	-	-	-	-	-	-	-	-	-
*15	Slipping segment	2	-	-	-	-	-	-	-	-	-	-
*16	O-Ring	3	-	-	-	-	-	-	-	-	-	-
19	Regulation nut	2	-	-	-	26 05 19	26 05 19	26 05 19	26 10 19	26 10 19	26 10 19	26 10 19
20	Bichromated nut	8	26 02 20	26 02 20	26 02 20	26 05 20	26 05 20	26 08 20	26 08 20	26 12 20	26 16 20	26 16 20
*21	O-Ring	2	26 02 21	26 02 21	26 02 21	26 05 21	26 05 21	26 05 21	26 10 21	26 10 21	26 10 21	26 10 21
22	Serrated washer	8	-	-	-	-	-	26 08 22	26 08 22	26 12 22	26 16 22	26 16 22

Spare kit components

Spare kit	025	032	040	050	063	080	100	125	160	200
Standard	26 02 40	26 03 40	26 04 40	26 05 40	26 06 40	26 08 40	26 10 40	26 12 40	26 16 40	26 20 40
High temperature (HT)	80 26 02 40	80 26 03 40	80 26 04 40	80 26 05 40	80 26 06 40	80 26 08 40	80 26 10 40	80 26 12 40	80 26 16 40	80 26 20 40

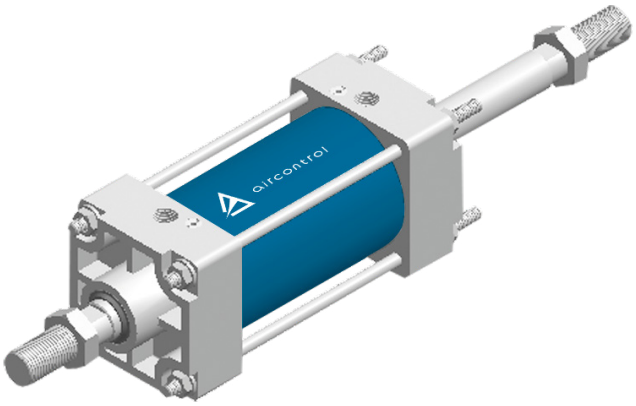
04MS Series

CNOMO cylinder variations

▶ Through rod cylinders

The design of these cylinders is based on the design of single rod cylinders. Thanks to the incorporation of a through rod, these cylinders are more rigid than the standard ones, allowing them to stand higher side impacts than normal cylinders. The most usual applications are the opening and closing of doors, position indication and those cases in which it is necessary to have a similar draught and thrust force at the same working pressure.

The CNOMO standard does not include variations.



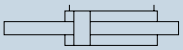
Ordering example

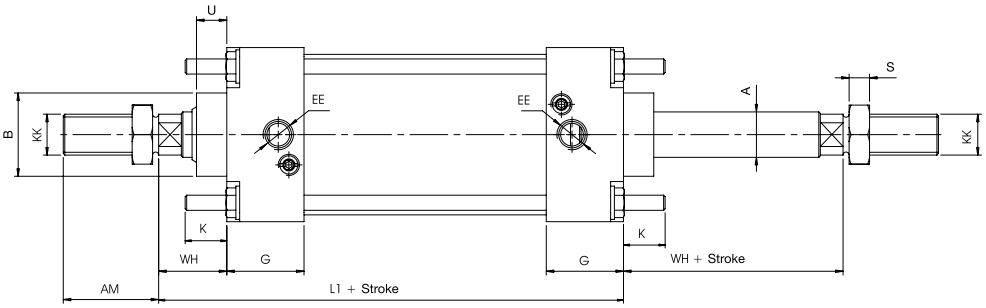
Through rod cylinder Ø 100 mm - stroke 250 mm

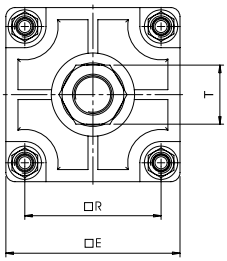
04 MS 100 A 0250

Version

4







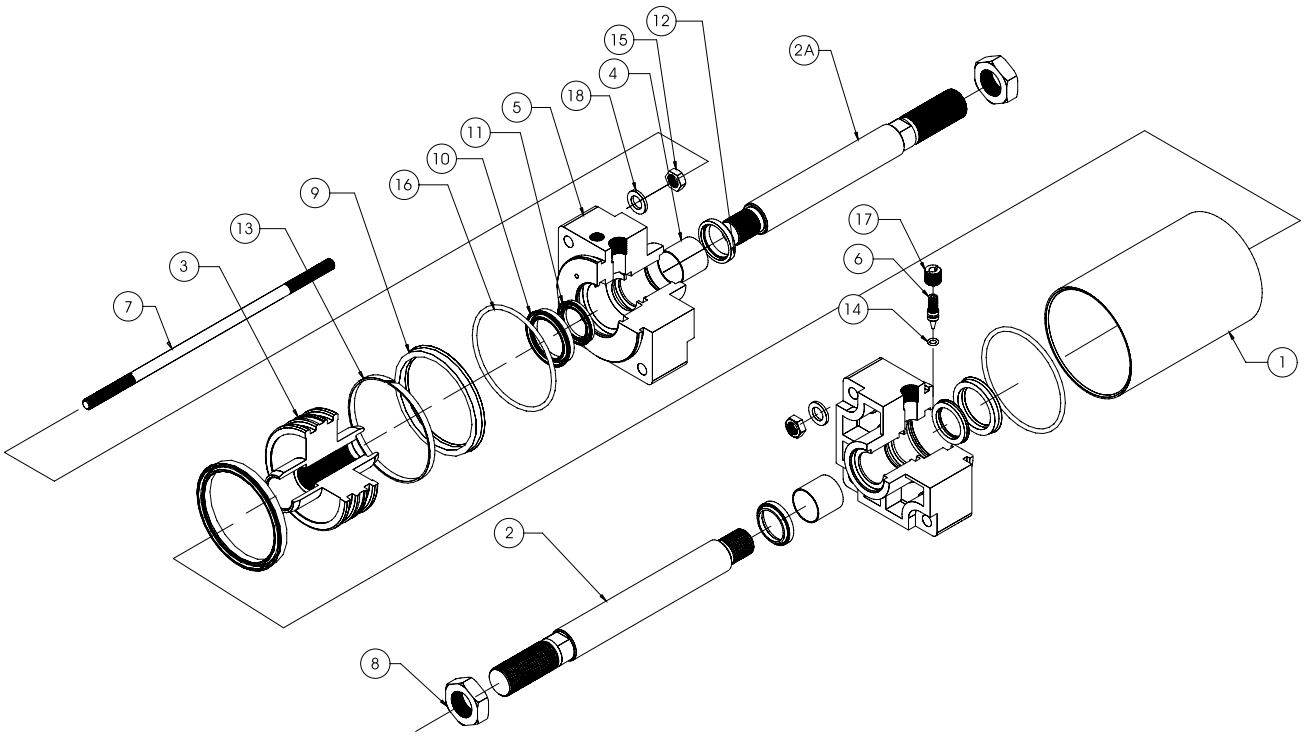
Ø	A	B	E	G	L1	R	AM	K	EE	KK	WH	S	T	U
25	12	25 e9	40	27,5	105	28	20	17	1/8”	M. 10x1.5	26,5	5	17	15
32	12	25 e9	45	28	105	33	20	17	1/8”	M. 10x1.5	26	5	17	15
40	18	32 e9	52	38	144	40	36	17	1/4”	M. 16x1.5	34	8	24	15
50	18	32 e9	65	38	144	49	36	23	1/4”	M. 16x1.5	34	8	24	15
63	22	45 e9	75	43	182	59	46	23	3/8”	M. 20x1.5	39	10	30	20
80	22	45 e9	95	43	182	75	46	28	3/8”	M. 20x1.5	39	10	30	20
100	30	55 e9	115	51	211	90	63	28	1/2”	M. 27x2	45	13.5	41	20
125	30	55 e9	140	51	211	110	63	34	1/2”	M. 27x2	46	13.5	41	20
160	40	65 e9	180	62	250	140	85	42	3/4”	M. 36x2	50	18	54	25
200	40	65 e9	220	62	250	175	85	42	3/4”	M. 36x2	50	18	54	25

General information, codification, strokes and technical specifications on pages 6 and 7.

04MS Series

CNOMO cylinder variations

Through rod cylinders ◄



Num.	Description	Units	Bore									
			025	032	040	050	063	080	100	125	160	200
1	Liner	1	27 02 XXXX	27 03 XXXX	27 04 XXXX	27 05 XXXX	27 06 XXXX	27 08 XXXX	27 10 XXXX	27 12 XXXX	27 16 XXXX	27 20 XXXX
2	Piston rod	1	28 02 XXXX	28 02 XXXX	28 04 XXXX	28 04 XXXX	28 06 XXXX	28 06 XXXX	28 10 XXXX	28 10 XXXX	28 16 XXXX	28 16 XXXX
2A	Piston rod	1	48 02 XXXX	48 02 XXXX	48 04 XXXX	48 04 XXXX	48 06 XXXX	48 06 XXXX	48 10 XXXX	48 10 XXXX	48 16 XXXX	48 16 XXXX
3	Piston	1	26 02 43	26 03 43	26 04 43	26 05 43	26 06 43	26 08 43	26 10 43	26 12 43	26 16 43	26 20 43
4	Guide bush	2	26 02 04	26 02 04	26 04 04	26 04 04	26 06 04	26 06 04	26 10 04	26 10 04	26 16 04	26 16 04
5	Cylinder head	2	26 02 05	26 03 05	26 04 05	26 05 05	26 06 05	26 08 05	26 10 05	26 12 05	26 16 05	26 20 05
6	Adjusting screw	2	26 02 08	26 02 08	28 02 08	26 05 08	26 05 08	26 05 08	26 10 08	26 10 08	26 10 08	26 10 08
7	Tie rod	4	49 02 XXXX	49 02 XXXX	49 04 XXXX	49 05 XXXX	49 06 XXXX	49 08 XXXX	49 10 XXXX	49 12 XXXX	49 16 XXXX	49 16 XXXX
8	Locknut	2	26 02 10	26 02 10	26 04 10	26 04 10	26 06 10	26 06 10	26 10 10	26 10 10	26 16 10	26 16 10
*9	Collar	2	-	-	-	-	-	-	-	-	-	-
10	Cushioning seal	2	-	-	-	-	-	-	-	-	-	-
11	Collar	2	-	-	-	-	-	-	-	-	-	-
12	Piston rod scraper	2	-	-	-	-	-	-	-	-	-	-
*13	Slipping segment	1	-	-	-	-	-	-	-	-	-	-
*14	O-Ring	2	-	-	-	-	-	-	-	-	-	-
*15	Bichromated nut	8	26 02 20	26 02 20	26 02 20	26 05 20	26 05 20	26 08 20	26 08 20	26 12 20	26 16 20	26 16 20
*16	O-Ring	2	-	-	-	-	-	-	-	-	-	-
*17	Regulation nut	2	-	-	-	26 05 19	26 05 19	26 05 19	26 10 19	26 10 19	26 10 19	26 10 19
*18	Serrated washer	8	-	-	-	-	-	26 08 22	26 08 22	26 12 22	26 16 22	26 16 22

Spare kit components

Spare kit	025	032	040	050	063	080	100	125	160	200
Standard	26 02 50	26 03 50	26 04 50	26 05 50	26 06 50	26 08 50	26 10 50	26 12 50	26 16 50	26 20 50
High temperature (HT)	80 26 02 50	80 26 03 50	80 26 04 50	80 26 05 50	80 26 06 50	80 26 08 50	80 26 10 50	80 26 12 50	80 26 16 50	80 26 20 50

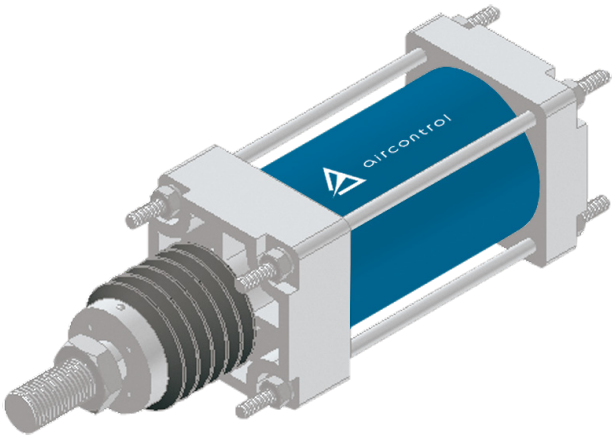
05MS Series

CNOMO cylinder variations

▶ Cylinders with bellow

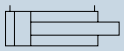
The piston rod protecting bellows are made of synthetic rubber. They have a cylindrical form and at both ends they have an elastic system to make the assembling and disassembling of the cylinder easier. They are used in places where the piston rod could suffer impacts from metallic particles, sand, etc. that could damage its surface. Other application fields are places with a dusty environment, like quarries, mines, cement factories, smelting works of the steel founding industry, etc.

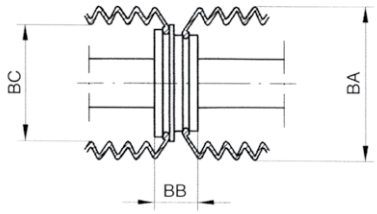
The CNOMO standard does not include variations.

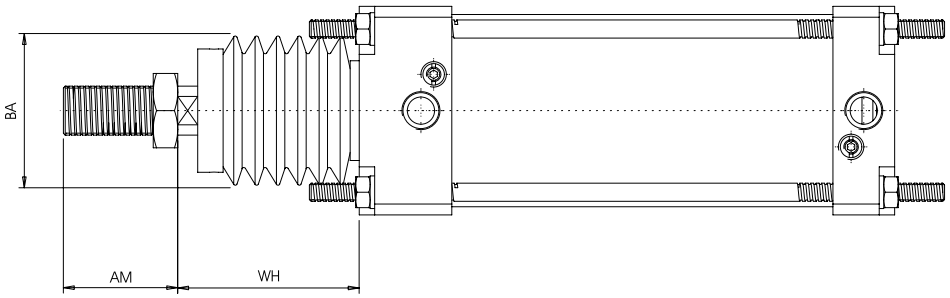


Ordering example

Cylinder with bellows Ø 160 mm - stroke 250 mm
05 MS 160 A 0250

Version
5 





Cylinder Ø	Rod	BA	BC	BB	AM	WH	Each additional bellow	Max. stroke per bellow	Piston rod ref.	Bellow ref.	Front bellow ref.	Connecting piece ref.	Front cap ref.	Setscrew ref.
40	18	48	26	15	36	93.5	70	200	58 04 XXXX	26 04 52	26 04 53	26 04 54	26 04 55	26 04 56
50													26 05 55	
63	22	48	26	15	46	99	70	200	58 06 XXXX	26 04 52	26 06 53	26 06 54	26 06 55	26 06 56
80													26 08 55	
100	30	85	45	20	63	100	90	300	58 10 XXXX	26 10 52	26 10 53	26 10 54	26 10 55	26 10 56
125													26 12 55	
160	40	85	45	20	85	100	90	300	58 16 XXXX	26 10 52	26 16 53	26 16 54	26 16 55	26 16 56
200													26 20 55	

General information, codification, strokes and technical specifications on pages 6 and 7.

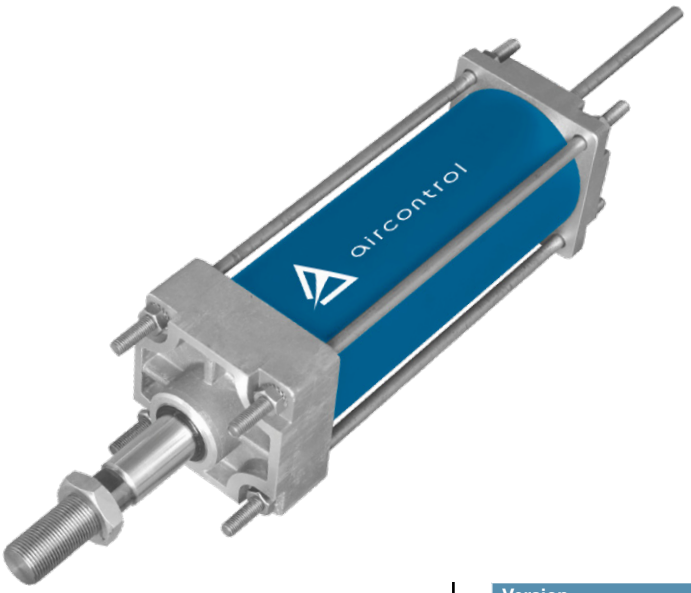
06MS Series

CNOMO cylinder variations

▶ Cylinders with adjustable stroke

The conception of this series allows adjusting the stroke entirely, besides having cushioning in all stroke positions. The stroke control is performed by using a feedscrew and an axially displaceable piston. By rotating the outer nut, the feedscrew moves linearly as a result of a special device. The air connection on the adjustment part of the cylinder is made through the end of the feedscrew and flexible tubing should be used to allow its movement. Applications of this type of cylinders are to be found in the opening and closing drive of doors, butterfly valves, hopper openings, small presses, etc.

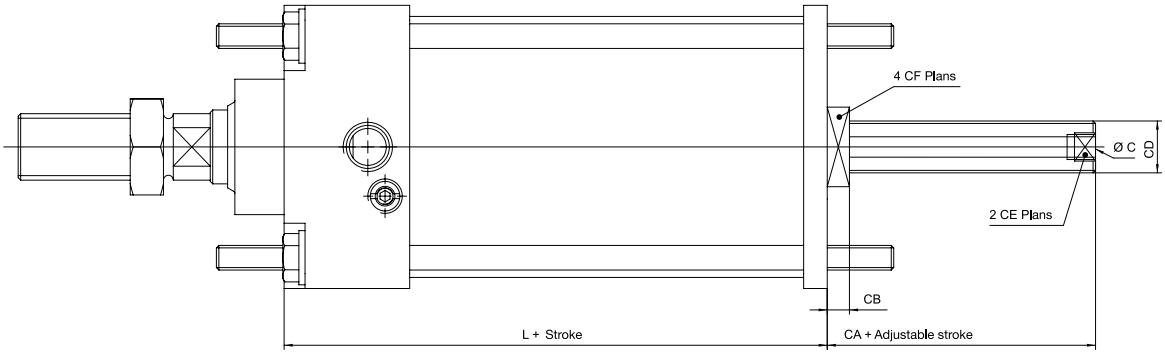
The CNOMO standard does not include variations.



Ordering example

Please contact our Technical Office for more information.

Version
6



Ø	C	L	CA	CB	CD	CE	CF
50	1/4”	129	42	22	M.22	18	26
63	3/8”	144	46	22	M.27	22	32
80	3/8”	144	46	22	M.27	22	32
100	1/2”	167	53	28	M.33	26	40
125	1/2”	167	53	28	M.33	26	40
160	3/4”	203	67	33	M.39	36	45
200	3/4”	203	67	33	M.39	36	45

General information, codification, strokes and technical specifications on pages 6 and 7.

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