



RODLESS CYLINDERS

GUIDED / STANDART

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SEMAK**MATIC**
PNEUMATIC EQUIPMENTS



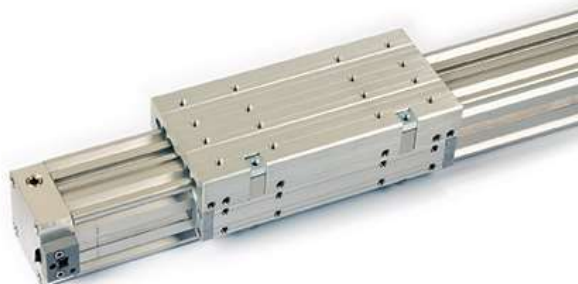
Standart rodless cylinder

SEMAKMATIC serie rodless cylinders , has two different versions which are non guided and guided .

Magnet and cushioned are standart for both serie.

Cylinders with direct power transmission through the tube slot on to the yoke. The new cushionings are adjustable at both ends ; the cushioning flow rate is regulated from 0 to 100 % by turning a pin of an angle of 90°. The new barrel with high resistance to deflection is provided with grooves for fixing various type of sensors.

Standart SEMAKMATIC serie of magnetic sensors can be used for rodless cylinders.



Rodless cylinder with guiding unit

ORDERING CODES

ordering code for standart serie	: SMS ... / ... CMYMS
ordering code for guided serie	: SMS ... / ... CMYMK
Diameters	: Ø18 - 25 - 32 - 40 - 50 - 63 mm
Standart strokes	: from 100 mm to 6000 mm
ordering code for 2 wire sensor	: SMSS5V0230ACDC0
ordering code for 3 wire PNP sensor	: SMSS5V030PNPDC0

For the sensor details please see page 1.92

Fluid : Compressed filtered air with or without lubrication

If lubrication used at ones must be continious .

Pressure range : 2 / 8 bar

Temperature range : - 10 ° C / + 50 ° C

Version : Magnetic , Cushioned ,Double acting

Materials

Heads : Anodized aluminium

Barrel : Anodized aluminium

Seals : Polyuretane - Piston : monoblock / yoke : Aluminium

Internal strip : Nylon

External strip : Stainless steel AISI 304

Wiper ring : PVC

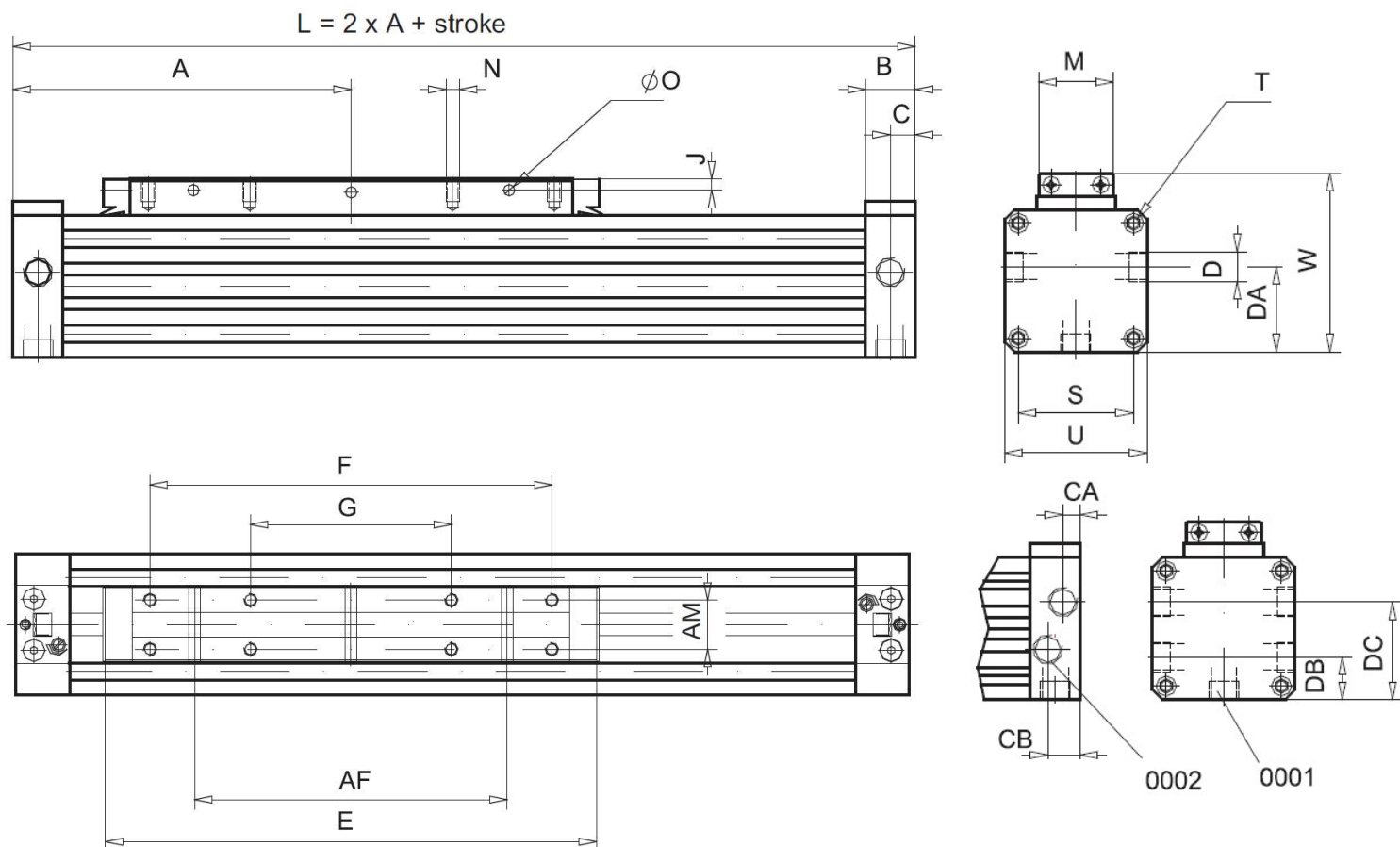
Details : nonguided and guided serie

Standart strokes : from 100 - 6000 mm

Before ordering the cylinder please see the applicable forces

RODLESS CYLINDERS

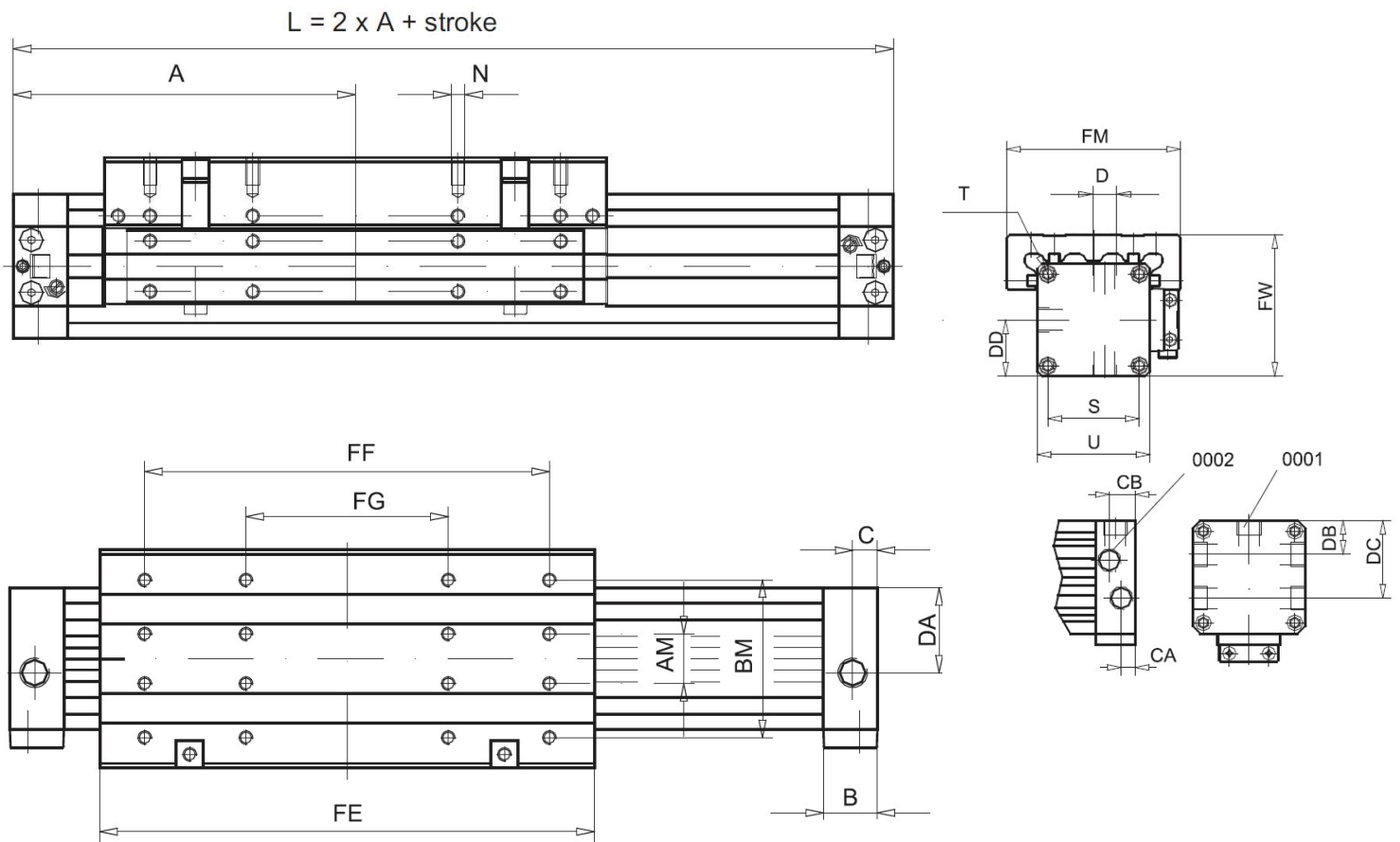
Rodless cylinder standart (SMS ... / CMYMS)



Ø	A	AF	AM	B	C	CA	D	DA	DB	DC
18	80	50	10	16,5	6,5	...	M5x6	15,5	...	...
25	100	70	13	20	8,5	7	1/8"x8	25,5	14	28
32	120	100	16	20	8,5	7	1/8"x8	32	16	34,5
40	150	140	22	23	12	11	1/4"x12	37,5	18,5	41
50	180	180	29	23	12	12	1/4"x12	47,5	22,5	47,5
63	215	230	40	29	12,5	12,5	3/8"x12	59,5	24,5	59,5

Ø	E	F	G	J	M	N	ø O	S	T	U	W
18	103	75	...	3	15,5	M3x6	3,5	23,5	M3x7	30	39
25	131	100	50	3,5	20	M4x7	4,5	33	M4x9	42	53
32	171	140	70	4,5	25	M5x9	5,5	41	M5x10	52	65
40	220	180	90	5	33	M6x10	7	51	M6x12	63	79
50	280	220	110	6,5	42	M8x12,5	7	63	M8x12	78	96
63	333	280	140	8	54	M8x15	9	78	M8x12	93	113,5

Rodless cylinder with guiding unit (SMS ... / ... CMYMK)

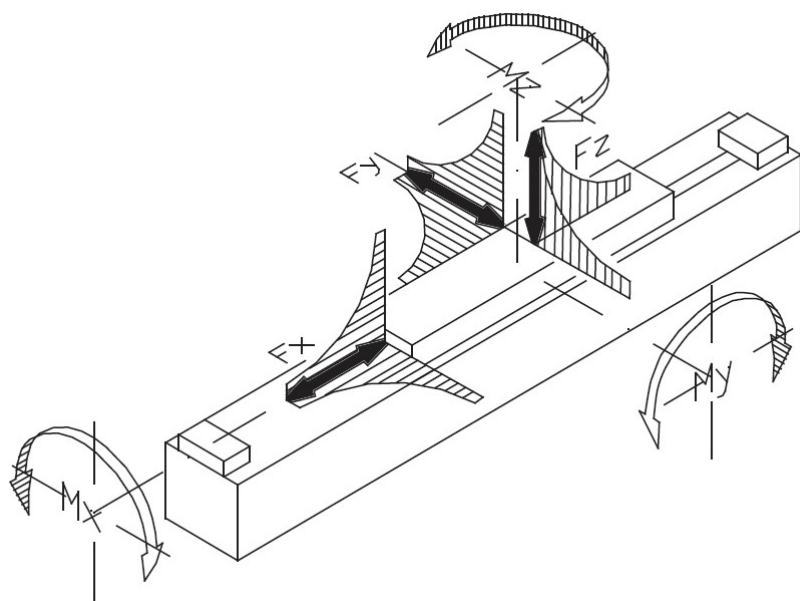


Ø	A	AM	B	BM	C	CA	CB	D	DA	DB
18	80	10	16,5	35	6,5	...	...	M5x6	17,5	...
25	100	13	20	45	8,5	7	13	1/8"x8	25,5	14
32	120	16	20	55	8,5	7	13	1/8"x8	32	17,5
40	150	22	24	70	11	9,5	14,5	1/4"x12	37,5	20
50	180	29	24	85	11	9,5	14,5	1/4"x12	47,5	26
63	215	40	30	105	14,5	11	18,5	3/8"x12	59,5	30

Ø	DC	DD	FE	FF	FG	FM	FW	N	S	T	U
18	...	15	103	75	...	50	39	M4x7,5	23,5	M3x7	30
25	28	21	131	100	50	66	53	M4x8	33	M4x9	42
32	34,5	26	171	140	70	80	65	M5x10	41	M5x10	52
40	42	31,5	220	180	90	97	79	M6x12	51	M6x12	63
50	52	39	280	220	110	116	96	M8x16	63	M8x12	78
63	62	46,5	333	280	140	136	113,5	M8x16	78	M8x12	93

RODLESS CYLINDERS

Rodless cylinder standart (SMS ... / CMYMS)



All datas concerning forces refer to a speed of $V < 0,35$ m/sec.

Keeping the indicated value ensures the maximum service life , the min. noise and the best operating result.

Higher speed reduces the admissible forces .

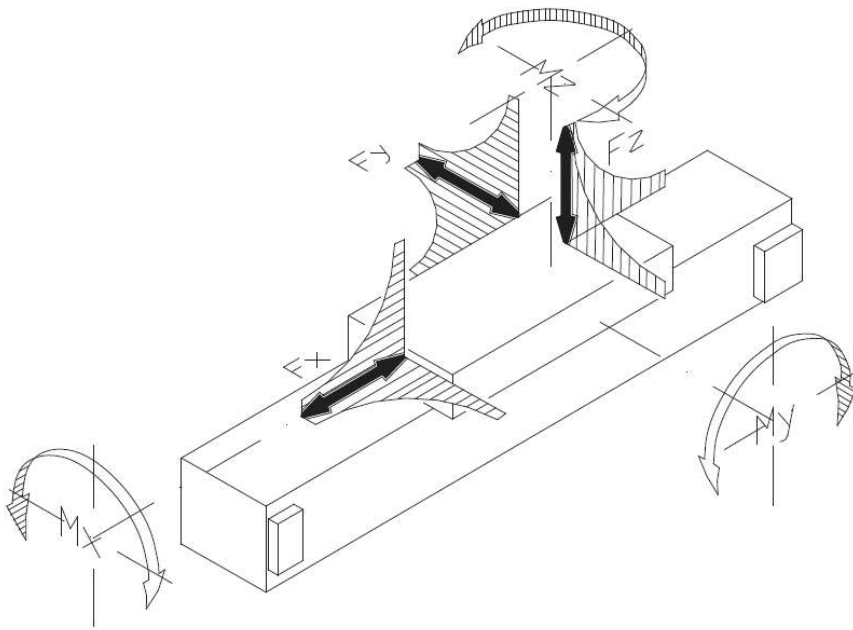
Where the working conditions out of the allowed limits (see table below), the energy of the mass in motion should be absorbed by devices mounted as much nearer to the barycenter of the mass .

Ø mm	Force (Vmax ? 0,35 m/s)			F (load in N)			Moments		
	Fx (N) 6 bar	Fy (N) 6 bar	Fz (N) 6 bar	0,75 m/s	1 m/s	1,5 m/s	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
18	140	80	300	80	40	20	1	3	3
25	270	110	480	155	90	40	2	13	13
32	440	165	650	280	155	70	3,5	25	25
40	680	225	800	500	290	125	5,5	40	40
50	1060	325	1060	790	420	195	10	65	65
63	1680	435	1680	1500	850	370	16	100	100

Internal view of the Rodless cylinder standart serie



Rodless cylinder with guiding unit (SMS . . . / CMYMK)



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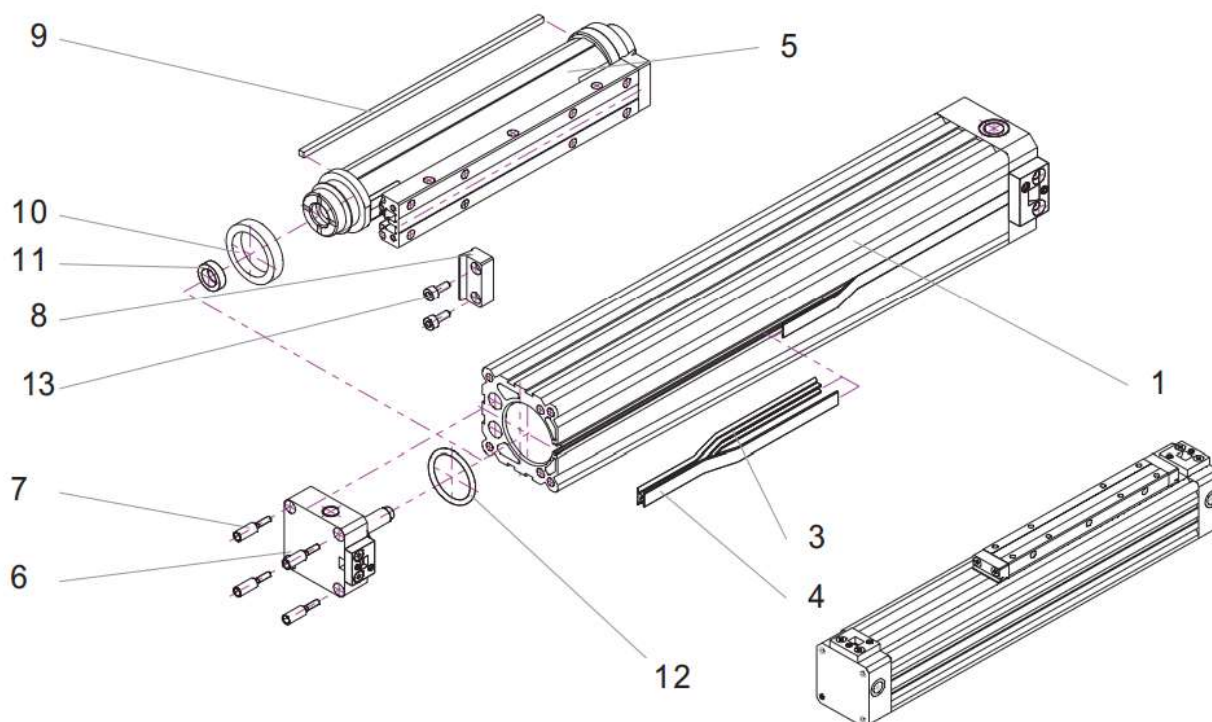
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18	140	370	370	100	58	26	3,5	6	6
25	270	800	800	280	160	65	10	20	20
32	440	1200	1200	510	300	140	25	45	45
40	680	1600	1600	1000	550	250	40	75	75
50	1060	2100	2100	1500	850	380	80	150	150
63	1680	2800	2800	2500	1400	610	110	250	250

External view of the Rodless guided cylinder



RODLESS CYLINDERS

Internal parts of the unguided rodless cylinder

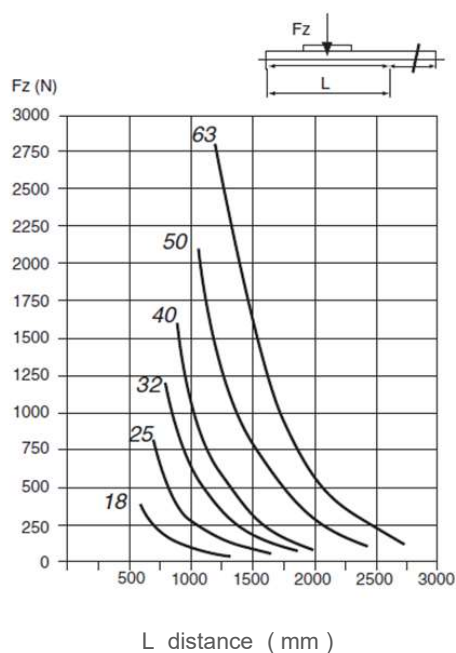


- 1. TUBE .. Al. Mg. Si. 0,5 al. anodized
- 3. SEALING STRIPE PA
- 4. COVER STRIPE Stainless steel
- 5. YOKE Al anodized / POM
- 6. END CAPS Al anodized
- 7. SPECIAL SCREW Zinc plated steel

- 8. HEAD WIPER POM
- 9. WIPER POM
- 10. PISTON SEAL PU
- 11. CUSHIONING RING NBR
- 12. O - RING NBR
- 13. SCREWS Zinc plated steel

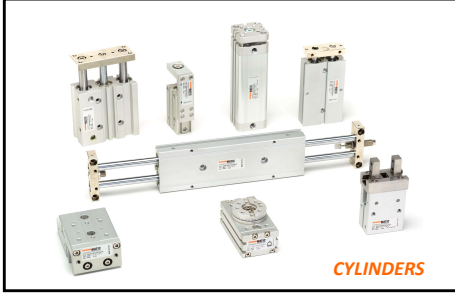
Max. admissible deflections & INTERNAL VIEW

Fz at deflection of 0,5 mm



When using a long cylinder or applying heavy loads , the tube deflection is to be taken in to consideration .One or more middle support are to be used according to the admissible deflection.

Ex.... A cylinder Ø 25 mm should deflect by a max. of 0,5 mm when Applying a force Fz of 500 N. According to the diagram the cylinder can be 750 mm long. Longer cylinders must have a middle support .



CYLINDERS



VALVES



FRL



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TURKEY

TEL : 0090 212 221 27 80 CELL : 0090 533 747 76 94

www.sematik.com
sematik@sematik.tr