



Description

The pneumatic servo-motors make it possible to convert a supply pressure into translatory movement.

They are used to motorize the control valves of and the on-off valves or all other models type EDELLE 2P or EDELLE 3P.

With a maximum feed of 6 bar, our servo-motors develop considerable efforts.

The feed can be carried out in standard by compressed air, nitrogen or filtered water. Some modifications can be brought for other fluids.

3 types of design make it possible to meet all the needs :

- SMA : the stem is OUT by airless
- RMA : the stem is IN by airless
- DEF : the stem leaves and returns according to the feed (Double EFFECT).

Force up to 8 tons,

Mechanical stroke indicator,

Surface from 95 to 1730 cm²,

Assembly of the accessories in NAMUR.

Option

- Manual handling,
- All parts in contact with the fluid in stainless steel
- All stainless steel actuator.
- Mechanical stroke switch

How to order

Actuator MA : type of fixation, size, stroke, maxi air supply, number of springs, type of spring, Action way, material.

Force for single acting actuator

TYPE	STROKE in mm		Maxi air supply in bar	TYPE OF SPRING	SPRING FORCE in daN		Spring range for maxi stroke
	maxi	useful			1 mm stroke	maxi stroke	
16.A6 (95 cm ²)	20	19	6	3R	19	88	0.2 – 1
				3G	80	118	0.72 – 1.36
				3S	115	170	0.93 – 2
				6G	159	237	1.37 – 2.68
				6S	231	339	1.95 – 4.05
				7G	179	270	1.52 – 3.12
				7S	262	388	2.13 – 4.58
21.B6 180 cm ²	35	34	6	2G	62	138	0.21 – 0.93
				3G	93	208	0.32 – 1.38
				6G	186	416	0.76 – 2.82
				7G	205	474	0.77 – 3.17
31.A6 400 cm ²	39	38	6	3R	127	408	0.22 – 1.08
				3G	213	500	0.40 – 1.34
				3S	382	826	0.72 – 2.24
				6G	420	1 000	0.79 – 2.66
				7G	469	1 131	0.90 – 3.02
				6S	757	1 654	1.52 – 4.53
				7S	851	1 917	1.77 – 5.17
31.B6 400 cm ²	20	19	6	3B	65	410	0.14 – 0.98
				3S	610	823	1.36 – 2.33
				6S	1 200	1 662	2.75 – 4.38
				7S	1 354	1 894	3.14 – 5.02
31.C6 400 cm ²	59	58	6	3G	145	434	0.27 – 1.27
				3S	179	905	0.33 – 2.48
				6G	291	869	0.55 – 2.50
				7G	322	996	0.61 – 2.85
				6S	335	1 758	0.62 – 4.85
				7S	372	2 003	0.7 – 5.6

TYPE	STROKE in mm		Maxi air supply in bar	TYPE OF SPRING	SPRING FORCE in daN		Spring range for maxi stroke
	maxi	useful			1 mm stroke	maxi stroke	
41.A6 800 cm ²	39	38	6	4G	347	662	0.32 – 0.87
				6G	521	993	0.48 – 1.31
				7G	608	1 159	0.57 – 1.58
				4S	734	1 208	0.66 – 1.56
				9G	782	1 490	0.73 – 2.01
				12G	1 043	1 987	0.99 – 2.67
				6S	1 101	1 812	1.02 – 2.34
				14G	1 217	2 319	1.15 – 3.10
				7S	1 281	2 114	1.19 – 2.75
				9S	1 650	2 718	1.56 – 3.50
				12S	2 202	3 624	2.07 – 4.67
				14S	2 571	4 228	2.41 – 5.44
41.B6 800 cm ²	57	56	6	4G	264	856	0.22 – 1.10
				6G	396	1 285	0.35 – 1.65
				7G	462	1 499	0.41 – 1.94
				4S	477	1 194	0.41 – 1.55
				9G	594	1 927	0.51 – 2.50
				6S	714	1 790	0.63 – 2.34
				12G	793	2 570	0.69 – 3.31
				14G	925	2 999	0.79 – 3.84
				9S	1 072	2 685	0.94 – 3.51
				12S	1 429	2 580	1.26 – 4.72
				14S	1 668	4 177	1.47 – 5.46
				41.C6 800 cm ²	85	84	6
4S	1 925	3 743	2.05 – 5.08				
41.D6 800 cm ²	113	112	6	2G	407	1 181	0.46 – 1.96
				4G	815	2 362	0.84 – 3.85

TYPE	STROKE en mm		Maxi air supply in bar	TYPE OF SPRING	SPRING FORCE in daN		Spring range for maxi stroke
	maxi	useful			1 mm stroke	maxi stroke	
60.G6 1730cm ²	59	58	6	4S	1 242	2 560	0.55 – 1.42
				6S	1 863	3 692	0.83 – 2.13
				8S	2 484	4 920	1.13 – 2.84
				12S	2 902	5 950	1.38 – 3.54
				16S	3 359	7 005	1.61 – 4.26
60.A6 1730cm ²	85	84	6	2G	809	1 594	0.37 – 0.93
				4G	1 618	3 188	0.74 – 1.86
				6G	2 427	4 782	1.11 – 2.79
				8G	3 237	6 377	1.48 – 3.72
60.B6 1730cm ²	108	107	6	2G	782	1 591	0.36 – 0.96
				4G	1 564	3 183	0.72 – 1.92
				6G	2 367	4 774	1.09 – 2.88
				8G	3 128	6 366	1.44 – 3.83
60.C6 1730cm ²	136	135	6	2G	1 018	1 482	0.49 – 0.99
				4G	2 037	2 964	0.99 – 1.97
				6G	3 055	4 446	1.48 – 2.95
				8G	4 074	5 928	1.97 – 3.94
60.D6 1730cm ²	125	124	6	2S	627	2 022	0.30 – 1.31
				4S	1 255	4 044	0.60 – 2.62
				6S	1 882	6 066	0.90 – 3.93
				8S	2 510	8 088	1.20 – 5.34

Force for double acting actuator

TYPE	STROKE in mm	Maxi air supply in bar	FORCE SUPPLIED BY THE AIR in daN			
			1,4 bar		6 bar	
MA			1 mm stroke	maxi stroke	1 mm stroke	maxi stroke
16.A6	50	6	180	101	737	473
21.A6	69		297	152	1152	748
31.A6	81		625	388	2509	1 892
41.A6	107		1275	849	5210	2 815

Dimensions

Single acting actuator

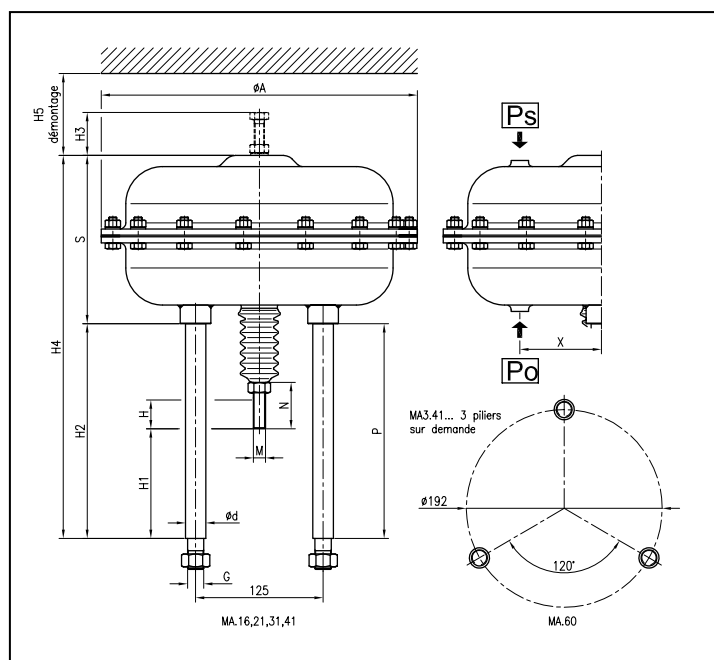
		Maxi stroke H	Ø A	H4	H2	S	H1	H3	H5	M	N	Ø d	G	R	Weight kg
MA3.16	A6	20	165	266	166	100	96	30	40	M12	37	20	M16	R ¼"	4
MA2.21	B6	35	220	343	227	117		42			55				7
MA3.31	A6	39	320	372	208	164		42			55				16
	B6	20	320	353	208	145	42	55	16						
	C6	59	320	414	230	184	42	55	18						
MA3.41	A4*	39	420	406	206	200	95	-	38	M16	60	28	M16	R ¼"	40
	B4*	57		442	224	218		-							47
	A6*	39		430	206	224		38							51
	B6*	57		466	224	242		38							58
MA2.41	C6*	85	600	639	287	352	96	45	45	M24x2	80	35	M24	R ¾"	76
	D6*	118		778	312	466		45							91
MA2.60	A6	85	600	822	288	534	96	83	55	M24x2	80	35	M24	R ¾"	192
MA3.60	B6	108		1008	310	698			65						235
	C6	136		1217	360	857			65						295
	D6	125		864	330	534			55						192
MA2.60	G6	60	643	260	383	42	55	160							

* Execution with 3 columns on request

Nota : H5 without limiter (H3)

Double acting actuator

		Maxi stroke H	Ø A	H4	H2	S	H1	H3	H5	M	N	Ø d	G	R	Weight kg
MA3.16	A6	51	165	303	199	100	93	52	40	M12	37	20	M16	R ¼"	4
MA2.21		70	220	396	271	117	97	70	40	M12	55	20			7
MA3.31		78	320	425	252	164	97	62	40	M16	55	20			16
MA3.41		112	420	504	274	230	93	50	40	M18x1.5	60	28			51
MA2.60		140	600	750	367	383	98	90	55	M24x2	80	35			M24



Dimensions of actuators with DIN / ISO 5211 connection plate

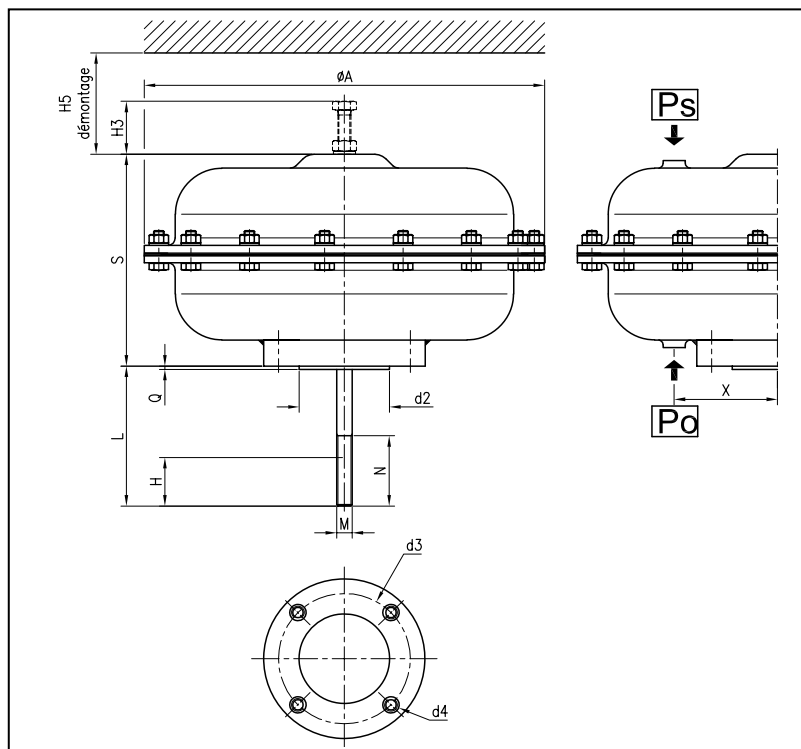
Single acting actuator

		Maxi stroke H	Ø A	S	H3	H5	L	M	N	Q	R	F	d2	d3	d4	Weight kg	
MA4.16	A6	20	165	103	30	40	67	M12	37	2.5	R $\frac{1}{4}$ "	F05	35	50	M6	3	
MA4.21	B6	35	220	128	42		119		55			5					
MA4.31	A6	39	320	167	26	40	109	M16	60	2.5	R $\frac{1}{4}$ "	F10	70	102	M10	14	
	B6	20	320	150			109									14	
	C6	59	320	188			132									16	
MA4.41	A4	39	420	202	-	45	111	M16	60	2.5	R $\frac{1}{4}$ "	F10	70	102	M10	37	
	B4	57		220	-		129									44	
	A6	39		226	26		111									48	
	B6	57		244	26		129									55	
	C6	90		354	26		192									72	
	D6	118		470	26		217									87	
MA4.60	A6	85	600	514	83	55	212	M24x2	80	4	R $\frac{3}{4}$ "	F14	100	140	M16	181	
	B6	108		652			65									234	223
	C6	136		837			65									284	283
	D6	125		514			55									254	181

Nota : H5 without limiter (H3)

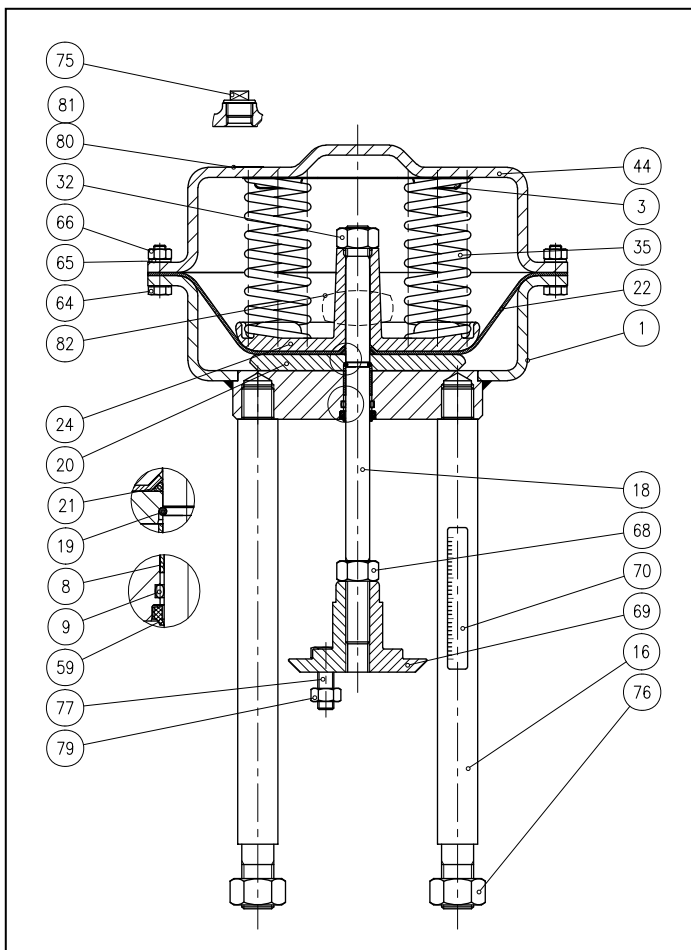
Double acting actuator

		Maxi stroke H	Ø A	S	H3	H5	L	M	N	Q	R	F	d2	d3	d4	Weight kg
MA4.16	A6	51	165	103	55	40	102	M12	37	2.5	R $\frac{1}{4}$ "	F05	35	50	M6	3
MA4.21		70	220	128	67	40	163	M12	55			5				
MA4.31		78	320	167	72	40	152	M16	55			F10	70	102	M10	14
MA4.41		112	420	226	36	40	181	M18x1.5	60			48				
MA4.60		140	600	364	90	55	288	M24x2	80			4	R $\frac{3}{4}$ "	F14	100	140



Description

Item	Designation	Item	Designation
1	Lower casing	51	O-ring
3	Spring centering plate	52	Screw
8	Guiding bush	59	Dirt stripper
9	O-ring	64	Screw
16	Column	65	Washer
18	Stem	66	Nut
19	Stem ring	68	Nut
20	Pressure plate	69	Half upper coupling
21	O-ring	70	Stroke indicator
22	Diaphragm	72	Gasket
24	Diaphragm plate	75	Vent screw
32	Nut	76	Nut
35	Spring	77	Screw
38	Spacer	79	Nut
44	Upper casing	80	Manufacturer plate
50	Cover	81	Rivet
		82	Spring sticker
Spare parts			



Drawing for presentation of MA21 and MA31

Description

