

# 1150-59 Butterfly valve with ADA pneumatic actuator

## MAIN CHARACTERISTICS

The 1150 to 1158+ADA range are butterfly valves dedicated to the automatic shut off of various fluids. Several versions are available depending upon the materials of the liner and the disc. This valve has long neck pattern for insulation purpose up to size 200 and 4 centring lugs. The valve has also a one piece sharf with anti-ejection device. As standard finish, the body has a high resistant rilsan coating.

The ADA actuator can be directly mounted thanks to the ISO 5211 pad of the valve, making a compact assembly. The ADA actuator is available in double acting and spring return versions with numerous options.



## AVAILABLE MODELS AND LIMITS OF USE

Sizes 32-40 to 1000

Wafer type for PN10/16 ANSI 150 flanges

Type	Body material	Disc material		Shaft material	Liner material	TS	
		DN 32 to DN100	DN125 and above			min.	max.
1141	SG iron EN-GJS 500-7	SS 1.4408	EN-JGS-500-7 chromed	AISI 304	NBR	- 10° C	+ 60 °C
1149			SS 1.4408	AISI 304	NBR carboxyl	- 10 °C	+ 80 °C
1150			EN-JGS-500-7 chromed	AISI 420	EPDM	- 5 °C	+90 °C
1151			SS 1.4408	AISI 304	NBR	- 10° C	+ 60 °C
1152			EN-JGS-500-7 chromed	AISI 420	NBR	- 10° C	+ 60 °C
1153			SS 1.4408	AISI 304	EPDM	- 5 °C	+ 90 °C
1154			SS 1.4408	AISI 304	FKM	- 5 °C	+150 °C
1156			SS 1.4408	AISI 304	NBR white	- 10° C	+ 60 °C
1157			SS 1.4408	AISI 304	Silicone	- 15 °C	+140 °C
1158			Aluminium bronze C415		AISI 304	NBR	- 10° C

Size	DN 32 to DN 200	DN 250 to DN 400
PS	16 bar	10 bar

## MOTORIZATION WITH ADA ACTUATOR

The actuators are sized for following operating conditions : - compressed air supply : 6 bar,  
- max. pressure differential up/downstream : 10 bar

Size	Double acting	Spring return
40	ADA 20	ASR 40
50	ADA 20	ASR 40
65	ADA 40	ASR 80
80	ADA 40	ASR 80
100	ADA 80	ASR 130
125	ADA 80	ASR 200

Size	Double acting	Spring return
150	ADA 130	ASR 300
200	ADA 200	ASR 500
250	ADA 300	ASR 500
300	ADA 500	ASR 850
350	ADA 850	ASR 1200
400	ADA 1750	ASR 2500

Modifications reserved

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# 1150-59 Butterfly valve with ADA pneumatic actuator

## OVERALL DIMENSIONS

To know the overall dimensions of the assembly 1150+ADA, consult the drawing n°796, on page 4 of that document.

## ADA ACTUATOR

See our technical data sheet FT1610 on page 5.

## OPTIONS

Others seats materials : EPDM HT, silicone food,..

Special painting for the body of the valve

Mirror polishing of the disc

Special coating for actuator

Oversized actuator

Stainless steel actuator

Manual gear box

Limits switches : all types

Position detector : all types

NAMUR solenoid pilot valves : all types

## STANDARDIZATION

Design according to EN 593,

Body materials according to EN 1503-1 and 1503-3

Face to face dimension according to EN 558-1 table 20,

Flanges according to EN 1092-1 and 2 and ANSI B16.5,

Top flange for motorization according to ISO 5211,

Final testing according to EN 12266-1

## HOMOLOGATIONS

PED 97/23/CE : Category III : homologation CE 0409

ATEX 94/9/CE : Groupe II, category 2, for areas 1,2,21 and 22

ACS, use for potable water, n° 07 ACC LY 504 (1150 and 1153)

Modifications reserved



Réf : FT 1150 + ADA ENG

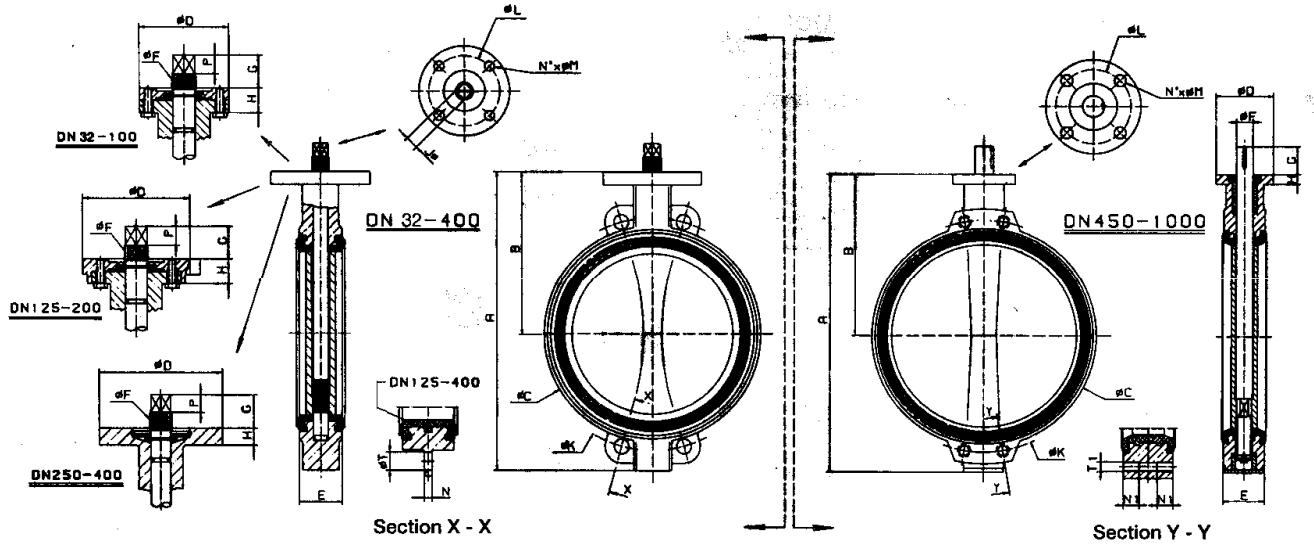
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# 1150-59 Butterfly valve with ADA pneumatic actuator

## DIMENSIONS (mm)



DN		A	B	C	D	E	F	G	H	J	K	L	N° x M	N	P	Trous lissés			Trous taraudés			kg
mm	Ø															T <sub>1</sub>	N°	N <sub>1</sub>	T <sub>1</sub>	N°		
32	1" 1/4	206	140	82	88	33	10,5	30	24	8	100	70	4 x 9	12	17	18	4	-	-	-	2	
40	1" 1/2	206	140	82	88	33	10,5	30	24	8	110	70	4 x 9	12	17	18	4	-	-	-	2	
50	2"	228	156	102	88	43	10,5	30	24	8	125	70	4 x 9	12	17	18	4	-	-	-	3,5	
65	2" 1/2	243	162	119	88	46	14,5	30	24	9	145	70	4 x 9	12	17	18	4	-	-	-	4,5	
80	3"	266	170	135	88	46	16,5	30	24	11	160	70	4 x 9	12	17	18	4	-	-	-	5	
100	4"	294	185	155	88	52	16,5	30	24	11	180	70	4 x 9	12	17	18	4	-	-	-	6,5	
125	5"	324	207	185	105	56	18,5	30	24	14	210	70	4 x 9	12	17	18	4	-	-	-	8	
150	6"	349	216	208	105	56	18,5	30	24	14	240	70	4 x 9	12	17	23	4	-	-	-	9	
200	8"	438	256	270	105	60	22,5	30	24	17	295	70	4 x 9	14	17	23	4	-	-	-	15	
250	10"	461	248	328	150	68	25,5	40	20	19	350	102	4 x 11	16	20	23	4	-	-	-	21,5	
300	12"	523	280	381	150	78	30,5	40	20	22	400	102	4 x 11	16	20	23	4	-	-	-	30	
350	14"	582	300	437	170	78	30,5	40	20	22	460	140	4 x 18	16	20	23	4	-	-	-	39	
400	16"	645	340	486	170	102	35,5	40	20	27	515	140	4 x 18	20	20	27	4	-	-	-	52	
450	18"	738	394	538	175	114	50	80	22	-	565	140	4 x 18	-	-	-	-	35	M24	4	87	
500	20"	822	440	595	175	127	50	80	25	-	620	140	4 x 18	-	-	-	-	35	M24	4	117	
600	24"	965	507	695	250	154	60	90	30	-	725	165	4 x 22	-	-	-	-	35	M27	4	177	
700	28"	1100	575	804	300	165	60	90	30	-	840	254	8 x 18	-	-	-	-	35	M27	4	258	
750	30"	1150	600	860	300	190	65	90	30	-	900	254	8 x 18	-	-	-	-	40	M30	4	296	
800	32"	1248	655	911	300	190	65	110	30	-	950	254	8 x 18	-	-	-	-	40	M30	4	330	
900	36"	1325	685	1010	300	203	80	110	30	-	1050	254	8 x 18	-	-	-	-	40	M30	4	505	
1000	40"	1457	754	1124	300	216	80	110	30	-	1160	254	8 x 18	-	-	-	-	40	M33	4	661	

Modifications reserved

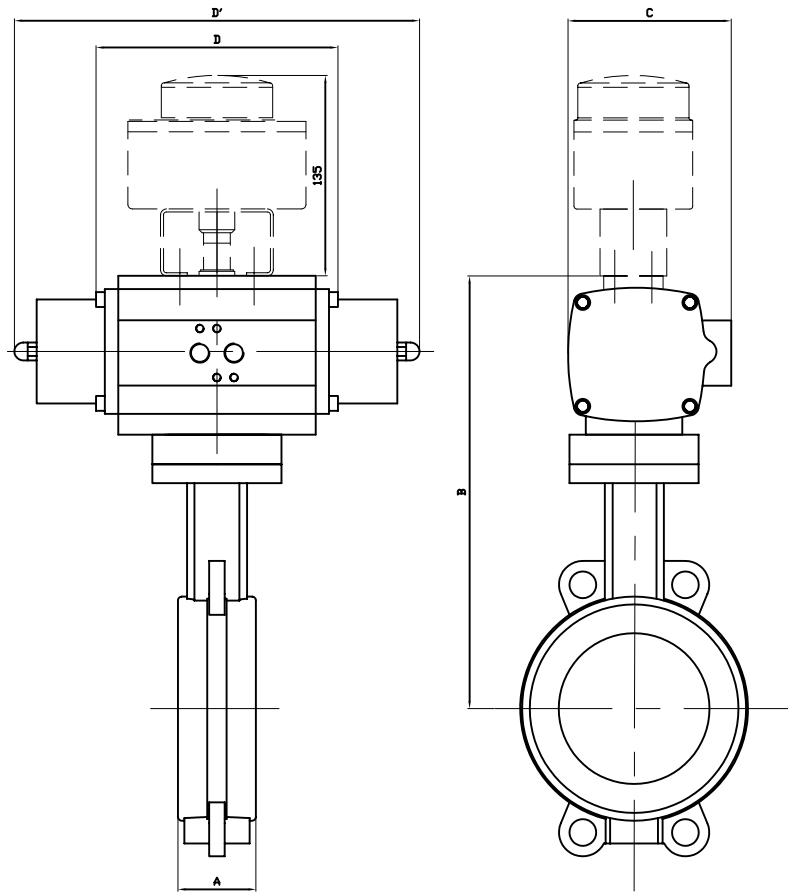


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DN	1"1/2		2"		2"1/2		3"		4"		5"	
ACTREG	20 DE	40 SE	20 DE	40 SE	40 DE	80 SE	40 DE	80 SE	80 DE	130 SE	80 DE	200 SE
A	33		43		46		46		52		56	
B	236	255	252	271	277	299	287	309	322	331	344	372
C	76	90	76	90	90	111	90	111	111	121	111	135
D / D'	128	230	128	230	143	260	143	260	162	270	162	335

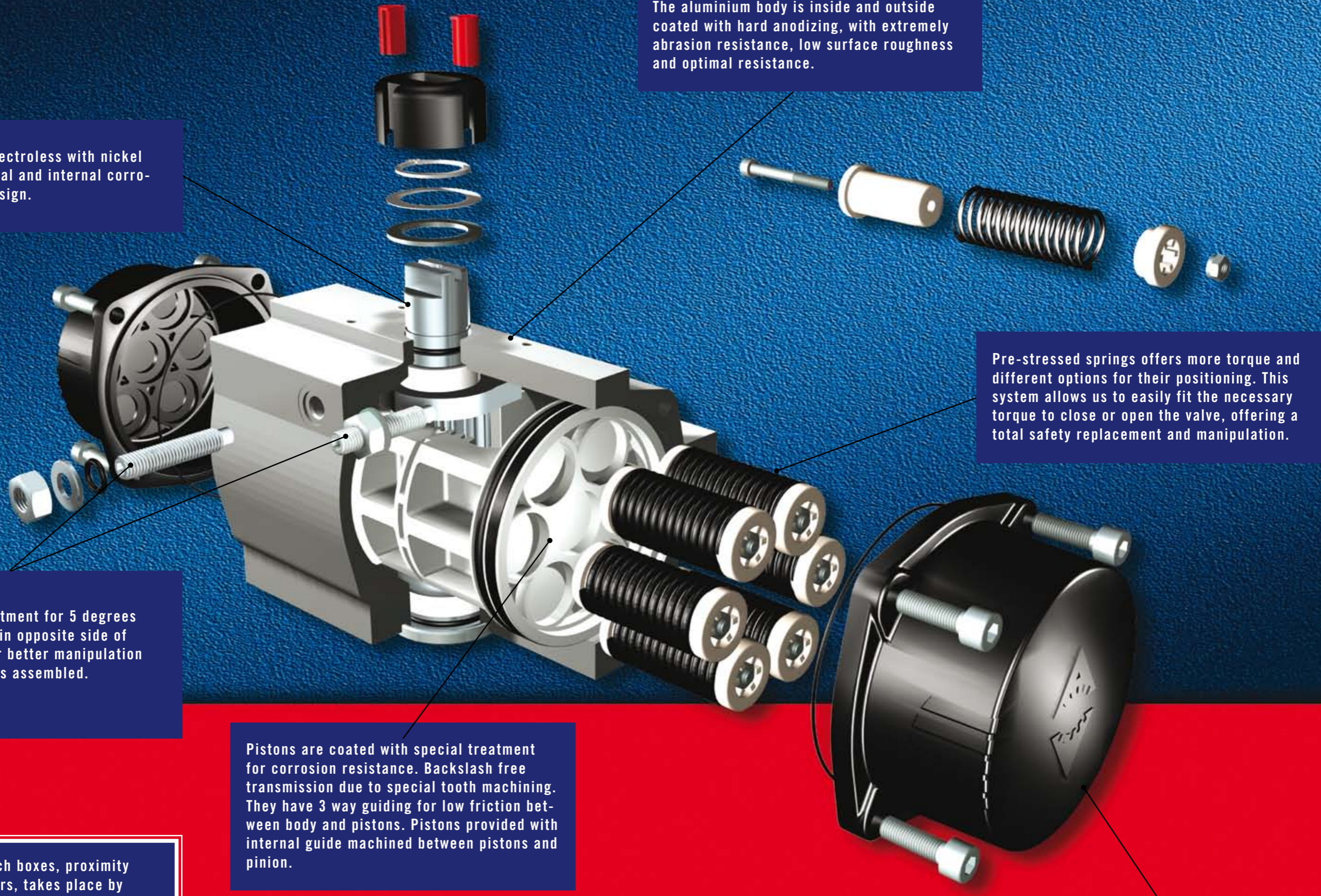
DN	6"		8"		10"		12"		14"		16"	
ACTREG	130 DE	300 SE	200 DE	500 SE	300 DE	850 SE	500 DE	1200 SE	850 DE	1750 SE	1200 DE	
A	56		60		68		78		78		102	
B	362	428*	421	485*	480**	515**	529**	579**	567**	630**	649**	
C	121	151	135	172	151	192	172	212	192	242	212	
D / D'	184	380	202	420	236	470	270	540	320	580	373	

\* : montage avec arcade de 60  
 \*\* : montage avec arcade de 80

Informations données à titre indicatif et sous réserve de modifications éventuelles

Ech:	Date :12/05/2004	Dessiné par : F.G.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
Actionneur ACTREG + BFC Vanne papillon 1120-1150				Matière :		
				Poids <Kg> :		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 796		





Carbon steel shaft electroless with nickel plated against external and internal corrosion. Anti-blowout design.

The aluminium body is inside and outside coated with hard anodizing, with extremely abrasion resistance, low surface roughness and optimal resistance.

Pre-stressed springs offers more torque and different options for their positioning. This system allows us to easily fit the necessary torque to close or open the valve, offering a total safety replacement and manipulation.

External stroke adjustment for 5 degrees regulation, designed in opposite side of Namur connection for better manipulation when solenoid valve is assembled.

Pistons are coated with special treatment for corrosion resistance. Backlash free transmission due to special tooth machining. They have 3 way guiding for low friction between body and pistons. Pistons provided with internal guide machined between pistons and pinion.

The assembly of switch boxes, proximity switches or positioners, takes place by means of the Namur connection VDI/VDE 3845, carried out like standard in all our models. The height of the axis to fulfil this Norm is of 30mm, for all our products, with which it entails that with a single model of Box or positioner, we can cover all our manufacturing range.

Every single actuator is tested and provided with a unique serial number for traceability. This heat number is stamped in the body.

Different end caps for double or single acting for fast and safety identification without the need to read the label, in addition less air consumption in double acting actuators. Epoxy coated as standard protected against environment corrosion.





ADA 10



SIZES:  
20 TO 2100



SIZE: 2500



SIZE: 4000



## TYPES OF ACTUATORS DOUBLE ACTING & SPRING RETURN

### GENERAL CHARACTERISTICS

- ADA type: Double acting.
- ASR type: Spring return.
- Rack and pinion design.
- Linear torque.
- Rotation angle  $90^\circ \pm 5^\circ$
- Antifriction sliding bearings.
- Long life without maintenance.
- Protected against environmental corrosion:
  - Hard anodized Aluminium body,
  - Electroless Nickel Plated pinion,
  - Epoxy coated end caps,
  - Stainless steel bolts, studs and nuts.
- Working temperature:  $-30^\circ\text{C}$  to  $100^\circ\text{C}$  in Standard Construction
  - $-15^\circ\text{C}$  to  $150^\circ\text{C}$  with FKM O-rings
  - $-40^\circ\text{C}$  to  $80^\circ\text{C}$  with Silicone O-rings
- Maximum working pressure: 8 bar (116 psig). (Except ADA10 at 10 bar)
- Total safety for springs replacement.
- Mounting of solenoid valves acc. NAMUR Std.
- Mounting of devices acc. NAMUR VDI/VDE 3845 Std.
- Coupling according to ISO 5211 and DIN 3337 (Octagonal drive)
- Position indicator can be used also to operate mechanical limit switches.

### OPTIONS ON REQUEST

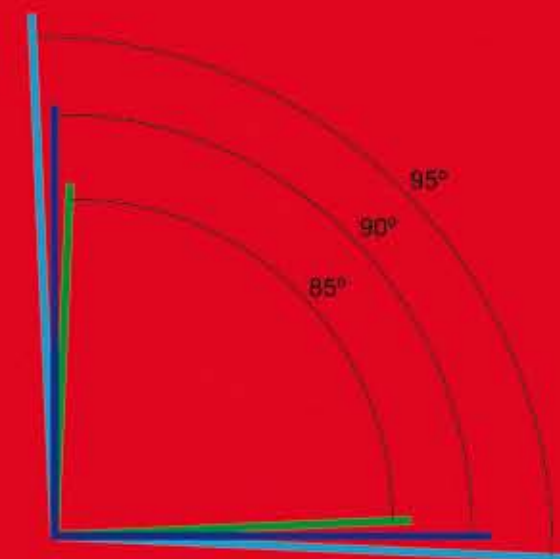
- Epoxy coated body.
- Electroless Nickel Plated body and end caps.
- High temperature construction.
- Low temperature construction.
- Stainless steel pinion
- Fast acting actuators
- Actuators with 100% travel adjustment stroke.

### BI-DIRECTIONAL TRAVEL STOPS

ACTREG pneumatic actuators are provided with bi-directional pinion travel stops.

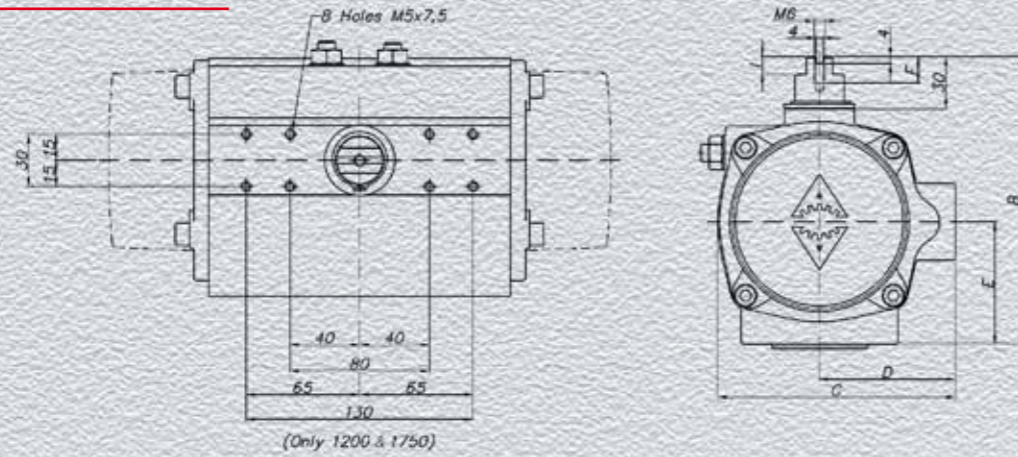
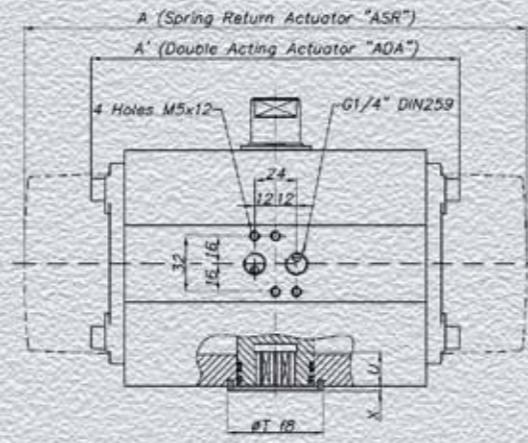
Side located stops allow a full  $\pm 5^\circ$  travel adjustment between  $85^\circ$  and  $95^\circ$ . These travel stops are designed to absorb the maximum rated torque of the actuator and the maximum impact loads associated with recommended travel speed.

Adjustment of the counterclockwise and clockwise rotation limits is accomplished by unscrewing the locking nuts, turning the respective left and right stop studs to reduce or increase the travel angle and screwing the locking nuts.





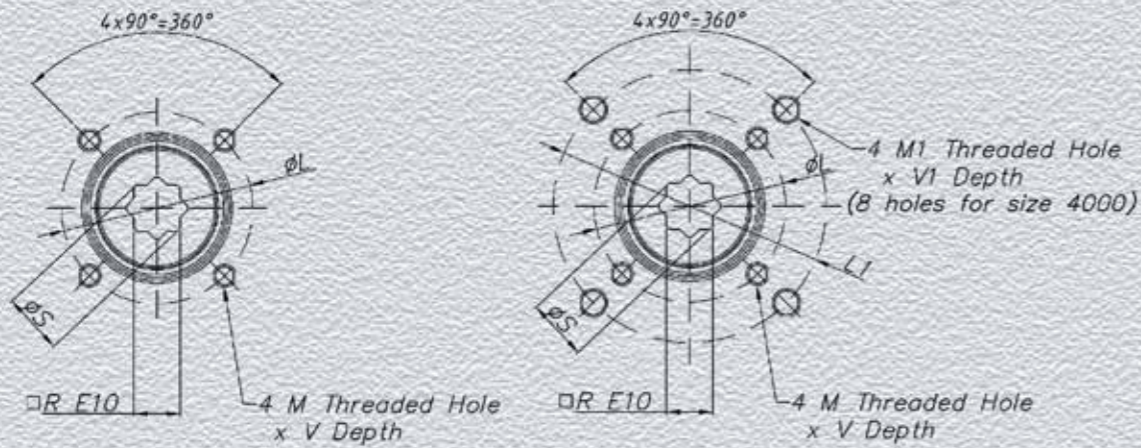
- 20
- 40
- 80
- 130
- SIZES: •200
- 300
- 500
- 850
- 1200
- 1750
- 2100



ISO 5211 DETAIL

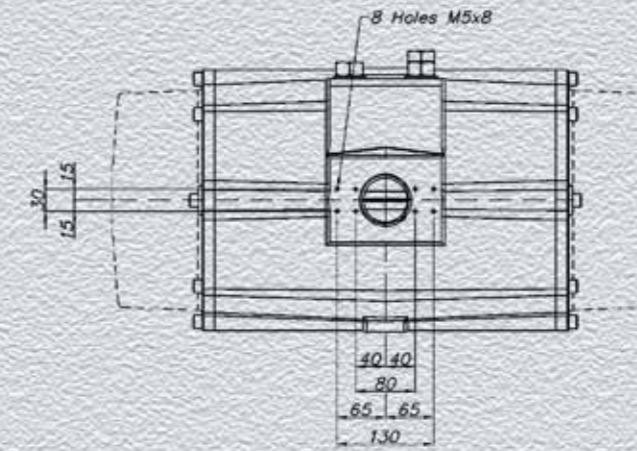
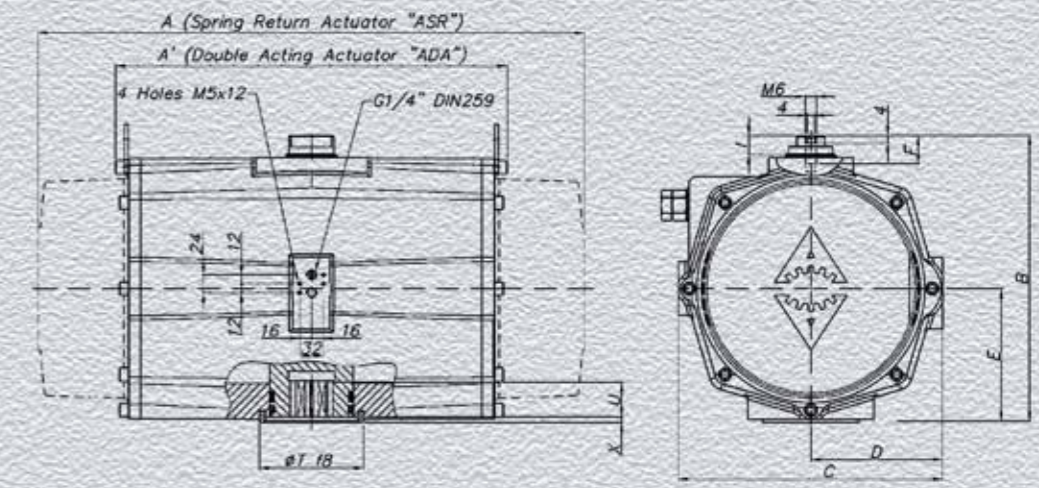
SIZES: •20•40•500•1750•2100•2500

SIZES: •20•40•130  
200•300•850•1200•4000

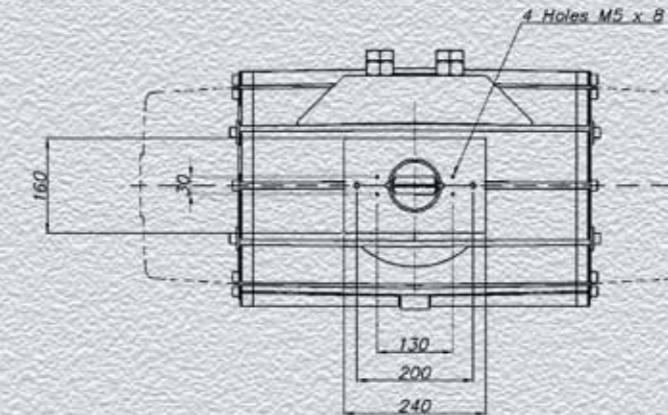
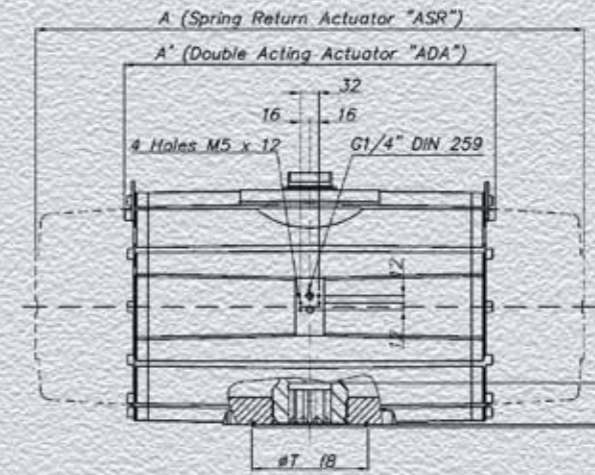


DOUBLE ACTING & SPRING RETURN ACTUATORS GENERAL DIMENSIONS IN mm

SIZE	A	A'	B	C	D	E	F	I	R	ρS	ISO 5211	ρL	MxV	ISO 5211	ρL1	M1xV1	ρT	X	U
20	163	145	96	76	48	34	9	6	9	12,5	F03	36	M5x8				25	2	10
20	163	145	96	76	48	34	9	6	14	18,1	F05	50	M6x10				35	3	12
20	163	145	96	76	48	34	9	6	14	18,1	F04	42	M5x10				35	3	12
40	195	158	115	91	56	45	9	6	14	18,1	F04	42	M5x10				35	3	12
40	195	158	115	91	56	45	9	6	14	18,1	F05	50	M6x10				35	3	12
80	217	177	137	111	66	55	12	8	17	22,5	F05	50	M6x10	F07	70	M8x16	55	3	19
130	258	196	147	122	71	60	15	8	17	22,5	F05	50	M6x10	F07	70	M8x16	55	3	22
200	299	225	165	135,5	78	70	15	10	17	22,5	F07	70	M8x16	F10	102	M10x16	55	3	23
300	348,5	273	182	152,5	86	80	16	12	22	28,5	F07	70	M8x16	F10	102	M10x16	70	3	24
500	397	304	199	173	96	85	17	15	22	28,5	F10	102	M10x16				70	3	32
850	473	372	221	191,5	106	98	15	15	27	36,5	F10	102	M10x17	F12	125	M12x20	85	3	39
1200	560	439	249	212,5	116	114	16	15	36	48,5	F10	102	M10x17	F14	140	M16x26	100	4	48
1750	601	461	280	242,5	131	130	16	15	36	48,5	F14	140	M16x26				100	4	50
2100	702	510	313	276,5	148	147	16	15	46	65,1	F16	165	M20x29				130	4	50



SIZES: •2500

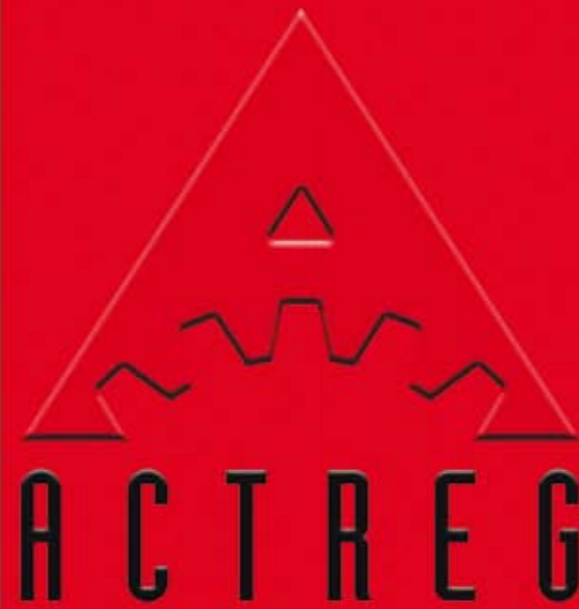


SIZES: •4000

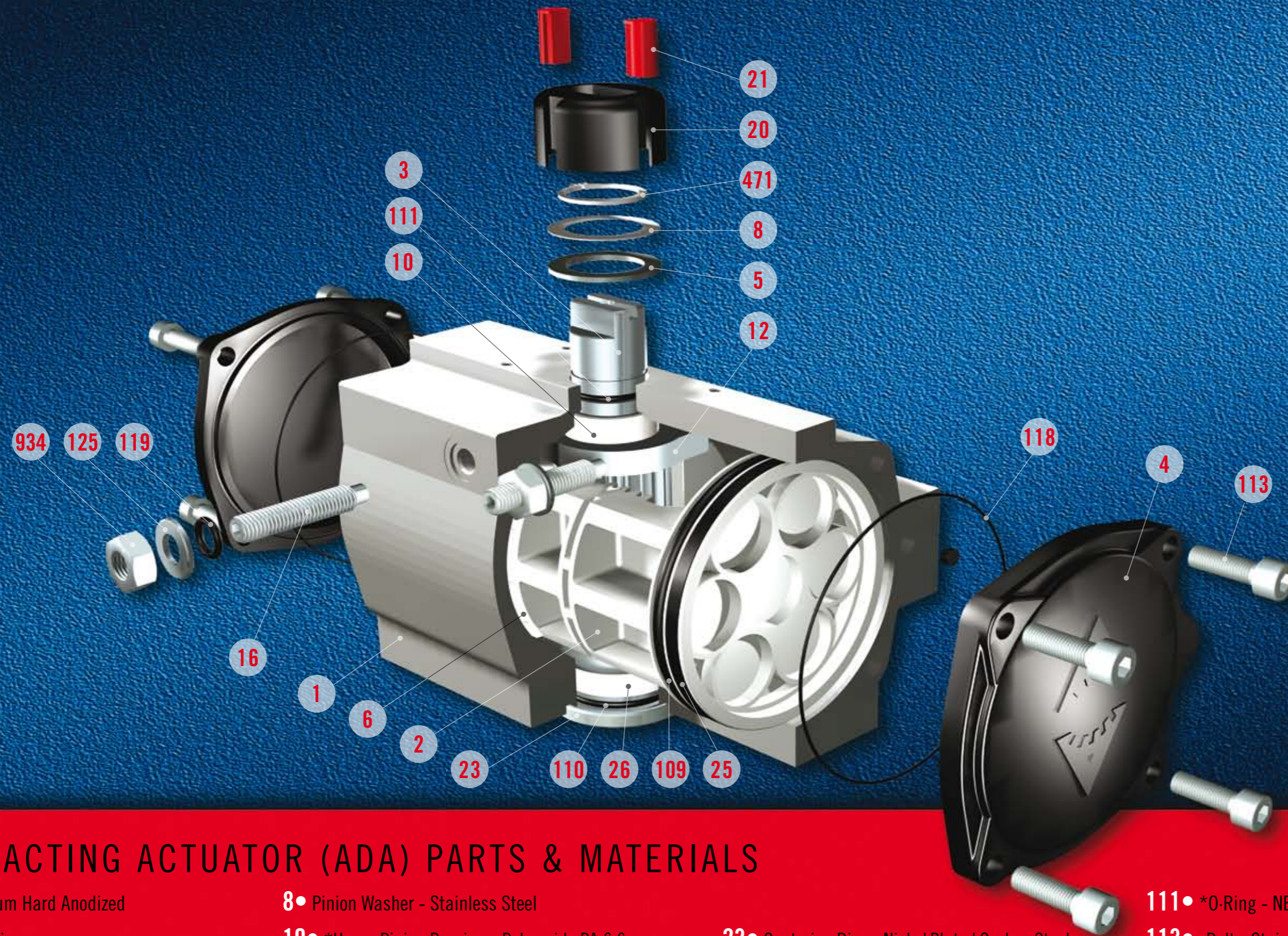
DOUBLE ACTING & SPRING RETURN ACTUATORS GENERAL DIMENSIONS IN mm

SIZE	A	A'	B	C	D	E	F	I	R	ρS	ISO 5211	ρL	MxV	ISO 5211	ρL1	M1xV1	ρT	X	U
2500	738	518	383	356	177,5	176,5	16	15	46	60,2	F16	165	M20x29				130	4	58
4000	940	630	434	415	213	201	16	15	55	72,5	F16	165	M20x30	F25	254	M16x30	200	4	60

NOTE: See page 8 for the ISO Detail.



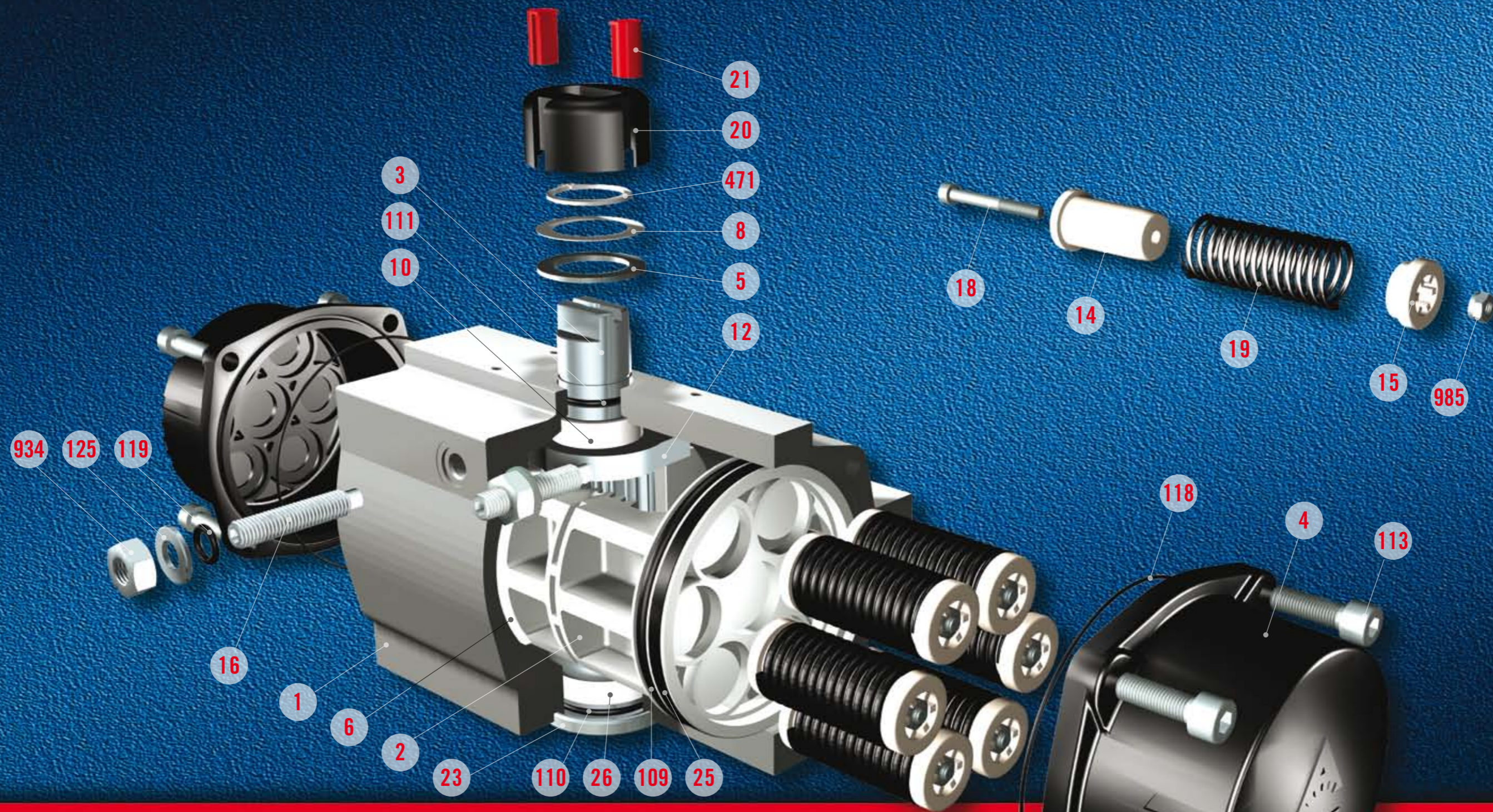




## DOUBLE ACTING ACTUATOR (ADA) PARTS & MATERIALS

- |  |  |   |                                     |
|--|--|---|-------------------------------------|
| 1• Body - Aluminium Hard Anodized              | 8• Pinion Washer - Stainless Steel   | 23• Centering Ring - Nickel Plated Carbon Steel | 111• *O-Ring - NBR                  |
| 2• Piston - Aluminium                          | 10• *Upper Pinion Bearing - Polyamide PA 6,6<br>Size 500 & greater in Reinforced Br. | 25• *Slide Guide - Polyamide PA 6,6 + 30% G.F.  | 113• Bolt - Stainless Steel         |
| 3• Pinion - Nickel Plated Carbon Steel         | 12• Stop - ASTM A-105  | 26• *Lower Pinion Bearing - Polyamide PA 6,6    | 118• *O-Ring - NBR                  |
| 4• End Caps - Aluminium Epoxy Coated           | 16• Adjustment Stroke Screw - Stainless Steel  | 41• **Stop Washer Pinion - Stainless Steel      | 119• *O-Ring - NBR                  |
| 5• *Soft Washer Pinion - Polyamide PA 6.6      | 20• Position Indicator - Polyamide   | 109• *O-Ring - NBR                              | 125• Washer - Stainless Steel       |
| 6• *Slide Piston - Polyamide PA 6,6 + 30% G.F. | 21• Cam - Polyamide  | 110• *O-Ring - NBR                              | 471• *Slip Washer - Stainless Steel |
| 7• **Lug - Nickel Plated Carbon Steel          |  |   | 934• Nut - Stainless Steel          |





## SPRING RETURN ACTUATOR (ASR) PARTS & MATERIALS

- |  |  |   |                                     |
|--|--|---|-------------------------------------|
| 1• Body - Aluminium Hard Anodized              | 10• *Upper Pinion Bearing - Polyamide PA 6,6<br>Size 500 & greater in Reinforced Br. | 20• Position Indicator - Polyamide              | 111• *O-Ring - NBR                  |
| 2• Piston - Aluminium                          | 12• Stop - ASTM A-105  | 21• Cam - Polyamide                             | 113• Bolt - Stainless Steel         |
| 3• Pinion - Nickel Plated Carbon Steel         | 14• Spring's Long Support - Polyamide PA 6.6   | 23• Centering Ring - Nickel Plated Carbon Steel | 118• *O-Ring - NBR                  |
| 4• End Caps - Aluminium Epoxy Coated           | 15• Spring's Short Support - Polyamide PA 6.6  | 25• *Slide Guide - Polyamide PA 6,6 + 30% G.F.  | 119• *O-Ring - NBR                  |
| 5• *Soft Washer Pinion- Polyamide PA 6.6       | 16• Adjustment Stroke Screw-Stainless Steel  | 26• *Lower Pinion Bearing - Polyamide PA 6,6    | 125• Washer - Stainless Steel       |
| 6• *Slide Piston - Polyamide PA 6,6 + 30% G.F. | 18• Bolt - Stainless Steel   | 41• **Stop Washer Pinion - Stainless Steel      | 471• *Slip Washer - Stainless Steel |
| 7• **Lug - Nickel Plated Carbon Steel          | 19• Spring - DIN 2076 · D-5.6  | 109• *O-Ring - NBR                              | 934• Nut - Stainless Steel          |
| 8• Pinion Washer - Stainless Steel             |  | 110• *O-Ring - NBR                              | 985• Nut - Stainless Steel          |

\*Recommended spare parts  
\*\*Only for sizes 2500 & 4000



Table with 26 columns: Size, TYPE, Pressure, and torque outputs for various sizes (10-4000) and pressures (3-10 bar) at 0° and 90° angles. Includes Weight (Kg) column.

▲ DOUBLE ACTING ACTUATOR TORQUE OUTPUT in Nm  
▼ SPRING RETURN ACTUATOR TORQUE OUTPUT in Nm

Table with 26 columns: Size, TYPE, Pressure, and torque outputs for various sizes (20-4000) and pressures (3-10 bar) at 0° and 90° angles. Includes Weight (Kg) column.

NOTE: A= STANDARD

Table with 26 columns: Size, TYPE, Pressure, and torque outputs for various sizes (10-4000) and pressures (43.5-145 psi) at 0° and 90° angles. Includes Weight (lb) column.

▲ DOUBLE ACTING ACTUATOR TORQUE OUTPUT in ft lb  
▼ SPRING RETURN ACTUATOR TORQUE OUTPUT in ft lb

Table with 26 columns: Size, TYPE, Pressure, and torque outputs for various sizes (20-4000) and pressures (43.5-145 psi) at 0° and 90° angles. Includes Spring stroke and Weight (lb) columns.

NOTE: A= STANDARD