

702-703 BALL VALVE WITH ADA PNEUMATIC ACTUATOR

DESCRIPTION

The 702-703 ball valves are dedicated to the automatic shut off of industrial fluid lines. It is a 3 pieces full valve with internal screws bore with a floating ball. The rating is 100 bar. It exists in carbon steel (702) and in stainless steel (703). This ball valve has the fire safe approval according to API 607. The ball and the non-ejection stem are in 316 stainless steel. The seats are in reinforced PTFE and the packing is in graphite. This valve has also a double tightness PTFE and graphite for the body.

The ISO 5211 mounting pad allows an easy actuation of the valve. The actuation with ADA pneumatic actuator is available both with double effect or spring return types. There are numerous options and accessories available.

AVAILABLE TYPES

702 : carbon steel body, sizes from 1/4" to 2"

703 : stainless steel body, sizes from 1/4" to 2"

Connections BSP, NPT, SW and BW

CLASSIFICATION ACC. TO PED 97/23

A3 §3 for sizes under 1 1/4"

Category II for sizes 1 1/4" and above: CE 0035 homologation

LIMITS OF USE

Sizes 1/4" to 3/4" PS : 140 bar at 20°C

Size 1" PS : 125 bar at 20°C

Sizes 1 1/4" to 2" PS : 100 bar at 20°C

TS : -20°C / + 218°C (carbon steel)

TS : -30°C / + 218°C (stainless steel)

OPTIONS

ATEX certification of the assembly

Declutchable manual override

Actuators with special coating

Actuator in stainless steel

Limits switches box

NAMUR pilot valve

Modifications reserved



ADA TYPE ACTUATOR

See the attached data file FT1510.

MOTORIZATION WITH ADA ACTUATOR

The standard actuation is sized for following conditions :

- pilot air feeding pressure : 6 bar,
- max. pressure drop into the valve : 10 bar.

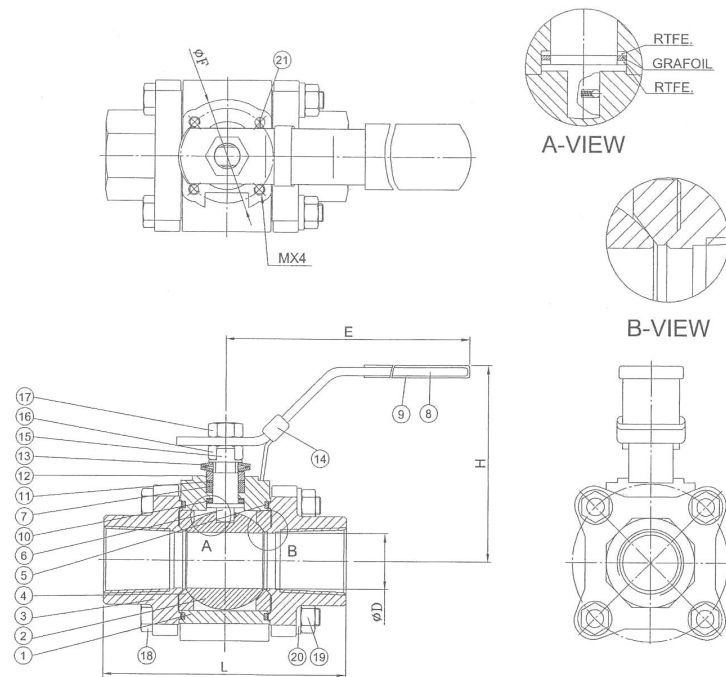
Size	Double acting	Spring return
1/4"	ADA 20	ASR 20
3/8"	ADA 20	ASR 20
1/2"	ADA 20	ASR 20
3/4"	ADA 20	ASR 40
1"	ADA 20	ASR 80
1 1/4"	ADA 40	ASR 80
1 1/2"	ADA 40	ASR 130
2"	ADA 80	ASR 200

DIMENSIONS

To know the overall dimensions of the assembly 702-703MD + AP, please consult the drawing attached to this document.

The linking pieces between valve and actuator are in stainless steel and are designed according to EN 15081 standard.

702-703 BALL VALVE WITH ADA PNEUMATIC ACTUATOR



CONSTRUCTION

N°	Item	702	703	N°	Item	702	703
1	Body	A216 WCB	A351 CF8M	12	Spacer	SS 304	
2	Ball	A351 CF8M		13	Belleville washer	SS 301	
3	Ends	A216 WCB	A351 CF8M	14	Locking device	SS 304	
4	Seat	PTFE+15%GR		15	Ring	SS 304	
5	Body gasket	Graphite		16	Nut	SS 304	
6	Stem	SS 316		17	Nut	SS 304	
7	Packing	Graphite		18	Screw	SS 304	
8	Handle	SS 304		19	Nut	SS 304	
9	Handle cover	Plastic		20	Ring	SS 304	
10	Stem gasket	PTFE + 15% GR		21	Pin	SS 304	
11	Packing	Graphite					

DIMENSIONS (mm)

Size	¼ØD	3/8ØD	½ØD	¾ØD	1ØD	1¼ØD	1½ØD	2ØD
ØD	10	10	15	20	25	32	38	50
E	134	134	134	134	170	170	207	215
ØF	F03	F03	F03	F03	F04	F04	F05	F07
H	64	64	72	77	83	88	104	133
L	64.8	64.8	72.5	85.4	105.3	111.0	127.3	145.0
M	M5	M5	M5	M5	M5	M5	M6	M6

Modifications reserved

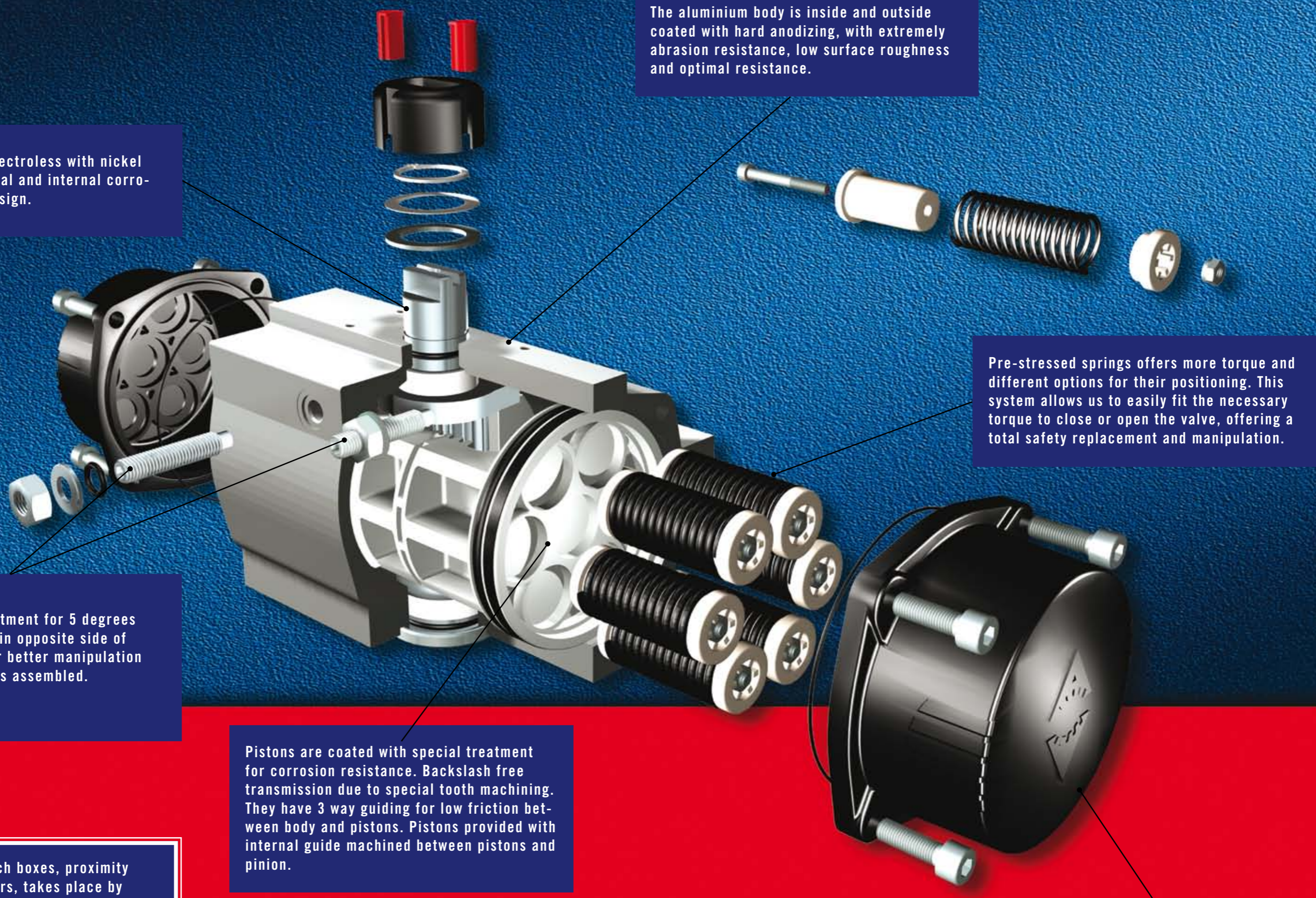


Réf : FT 702ADAENG

Rev : 0

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Date : 01/11



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

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

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°C to 100°C in Standard Construction
 - -15°C to 150°C with FKM O-rings
 - -40°C to 80°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

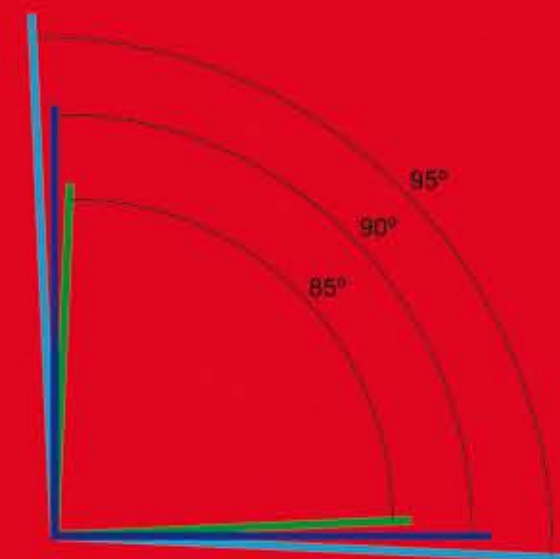
- Epoxy coated body.
- Electroless Nickel Plated body and end caps.
- High temperature construction.
- Low temperature construction.
- Stainless steel pinion
- Fast acting actuators
- Actuators with 100% travel adjustment stroke.

BI-DIRECTIONAL TRAVEL STOPS

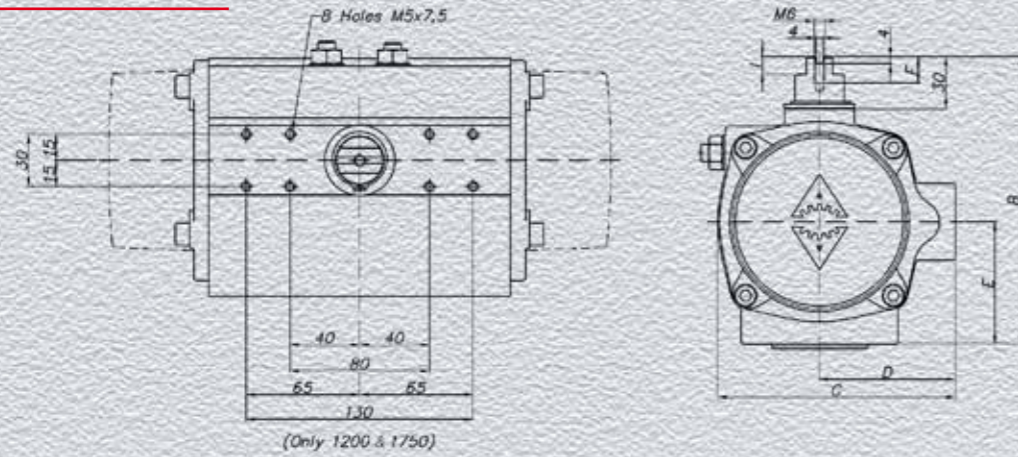
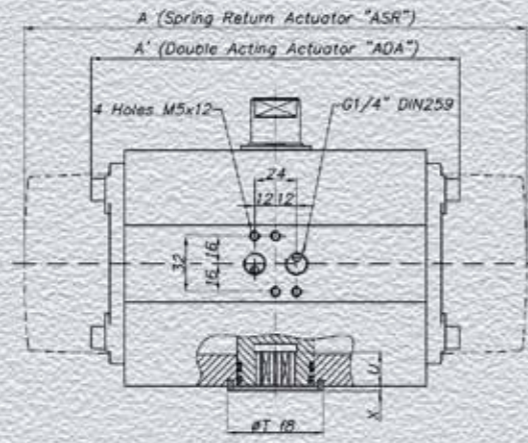
ACTREG pneumatic actuators are provided with bi-directional pinion travel stops.

Side located stops allow a full $\pm 5^\circ$ travel adjustment between 85° and 95° . 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.



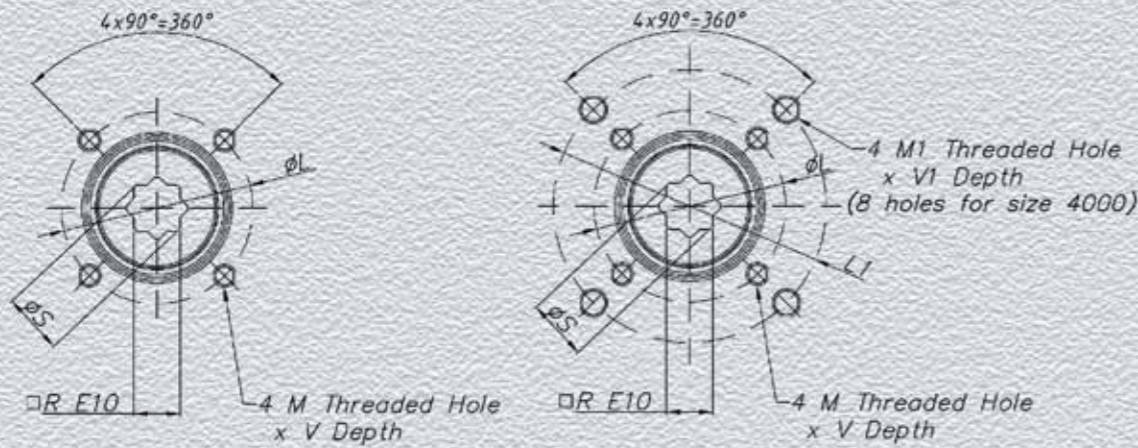
- 20
- 40
- 80
- 130
- SIZES: •200
- 300
- 500
- 850
- 1200
- 1750
- 2100



ISO 5211 DETAIL

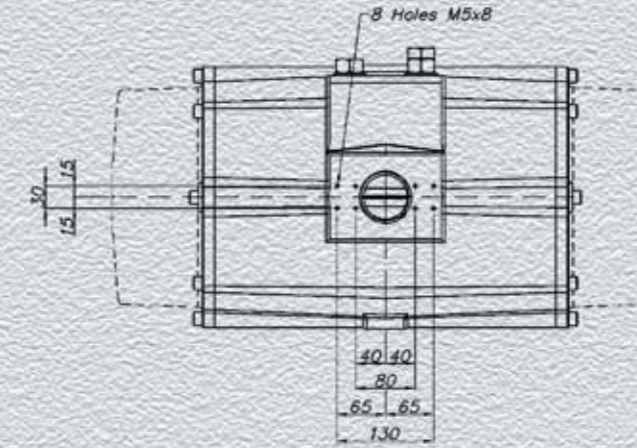
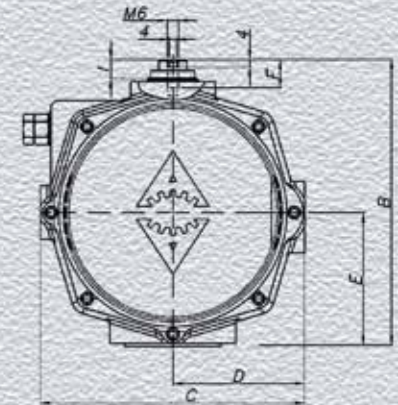
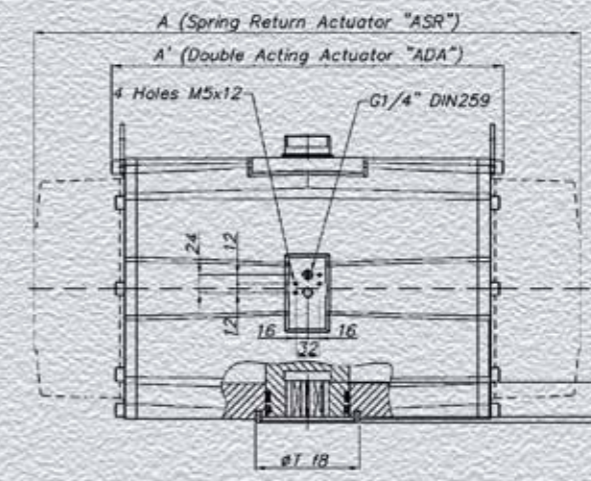
SIZES: •20•40•500•1750•2100•2500

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

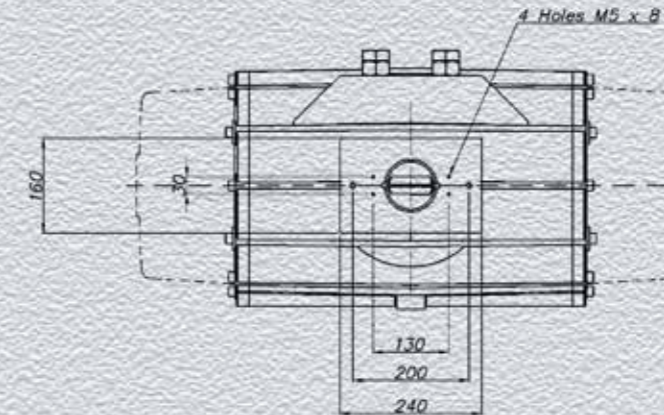
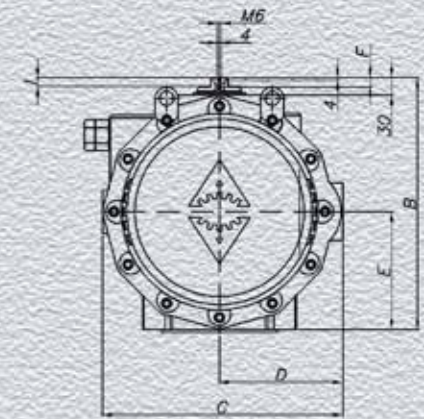
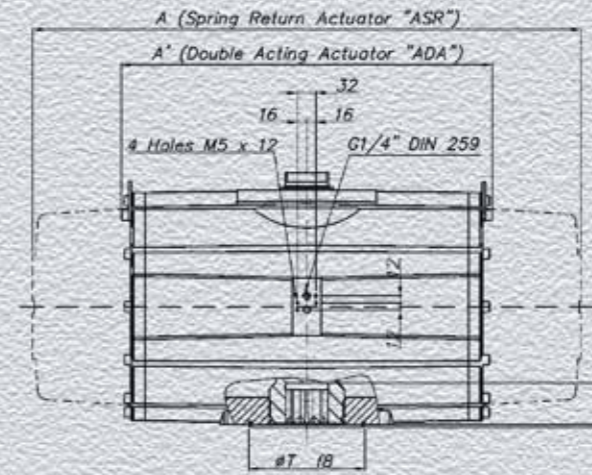


DOUBLE ACTING & SPRING RETURN ACTUATORS GENERAL DIMENSIONS IN mm

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

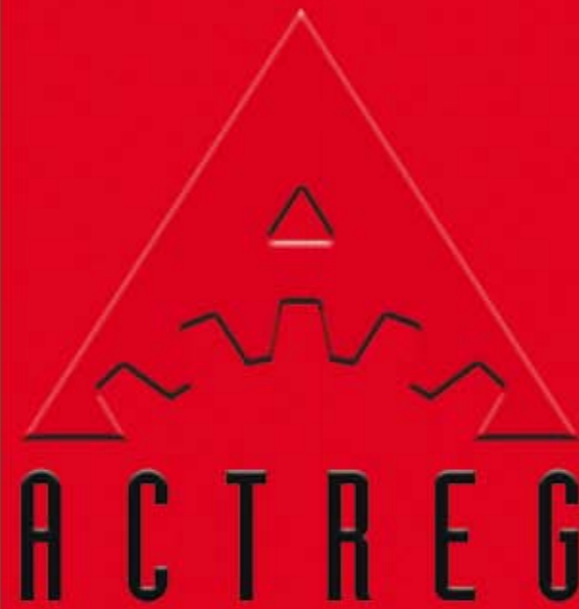


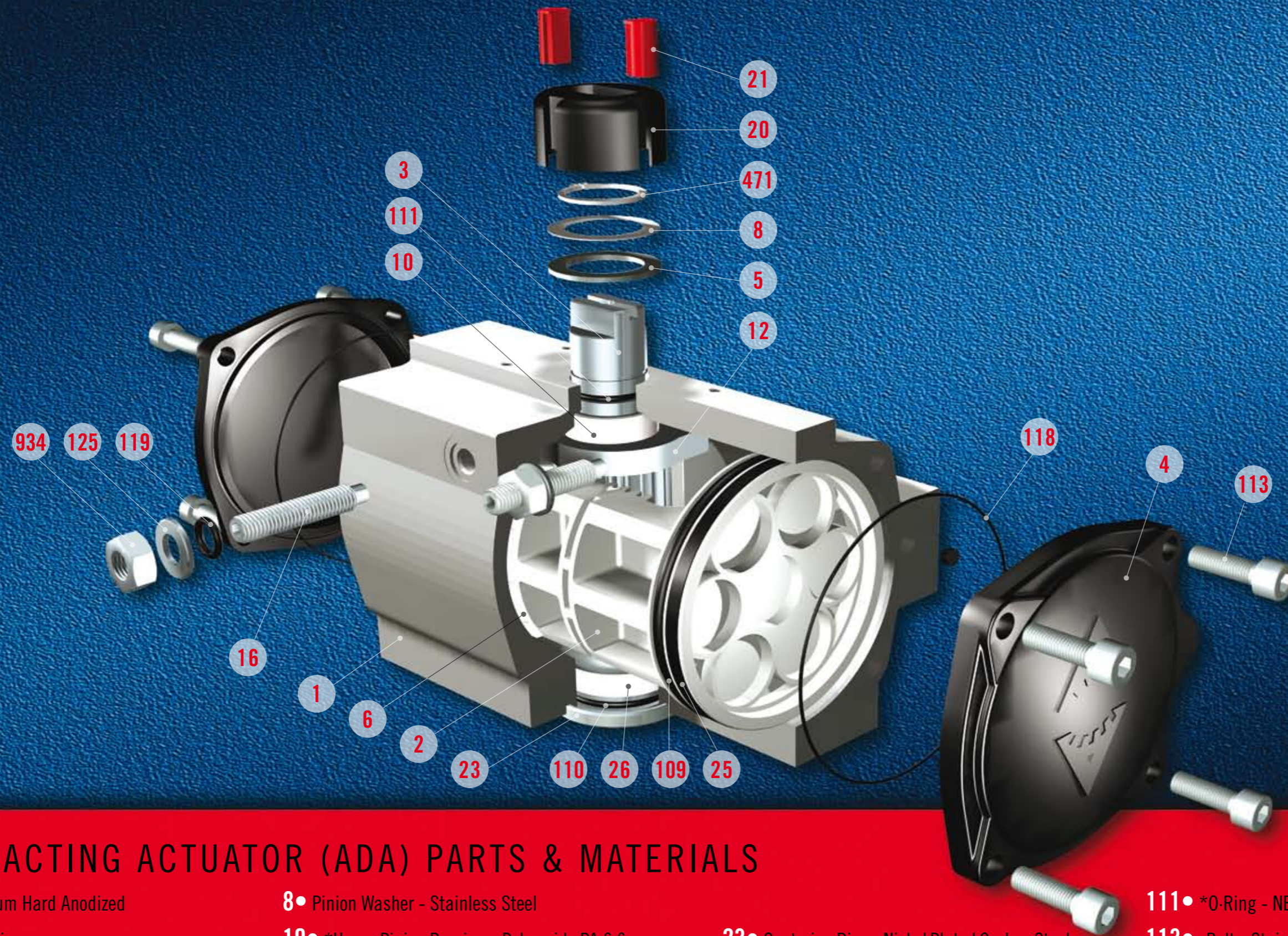
SIZES: •4000

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

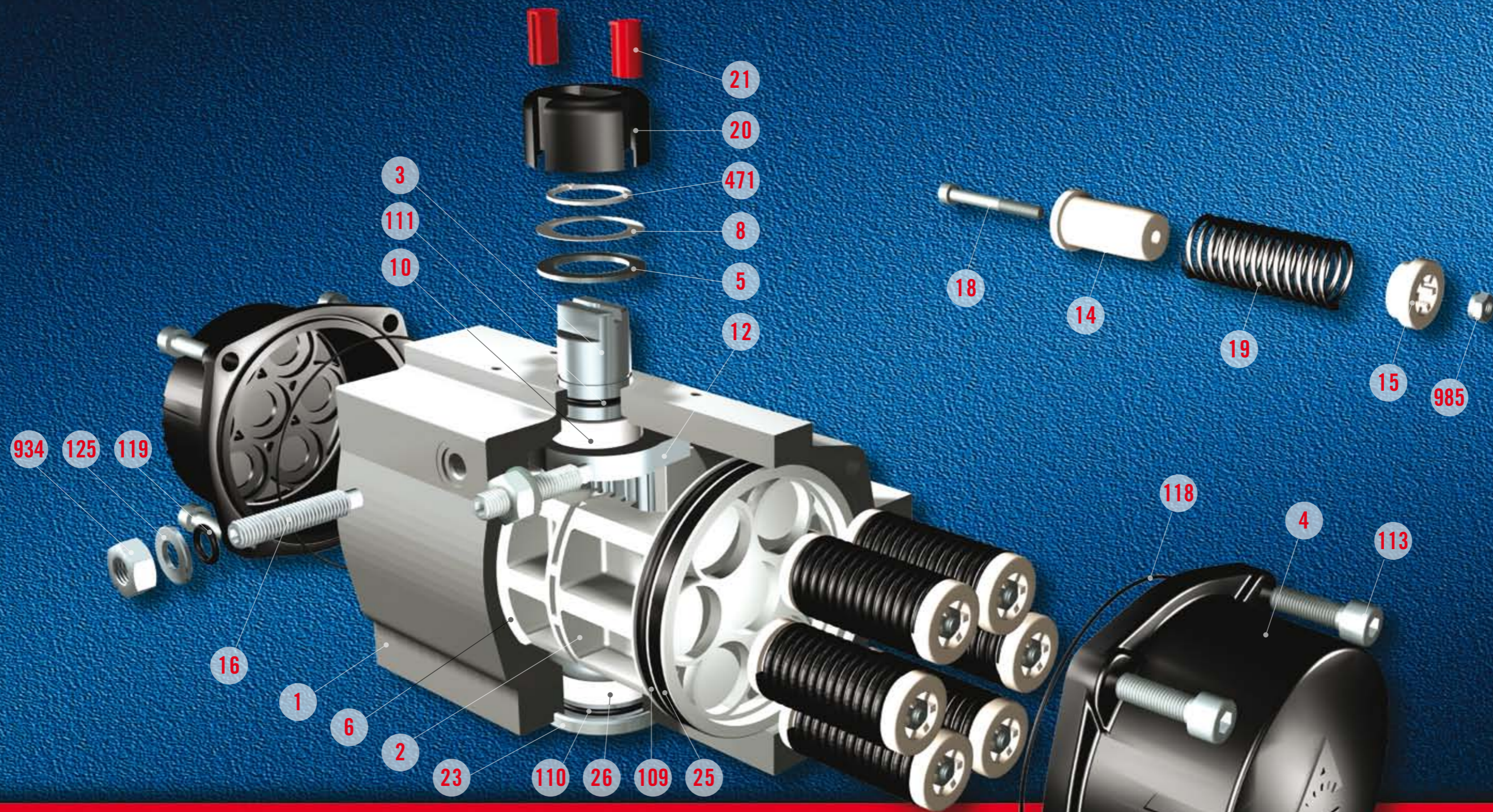
NOTE: See page 8 for the ISO Detail.





DOUBLE ACTING ACTUATOR (ADA) PARTS & MATERIALS

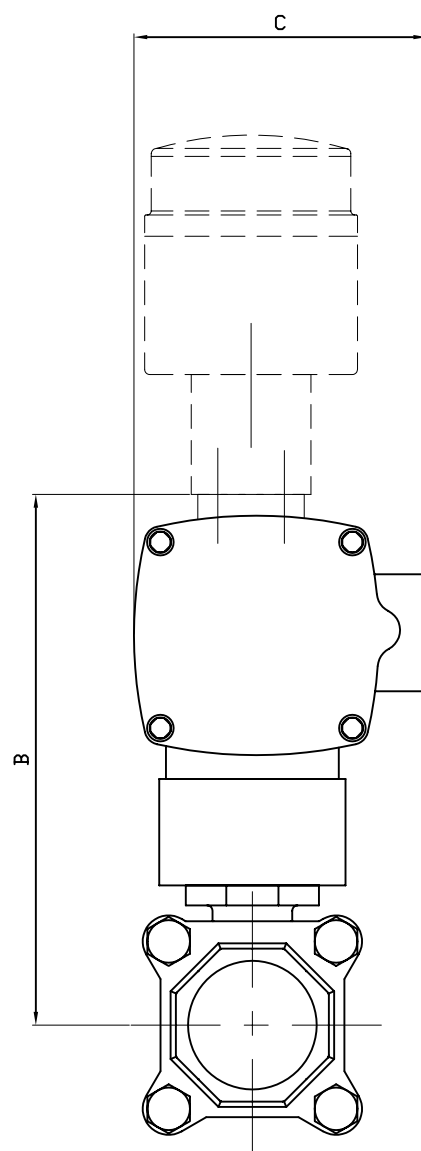
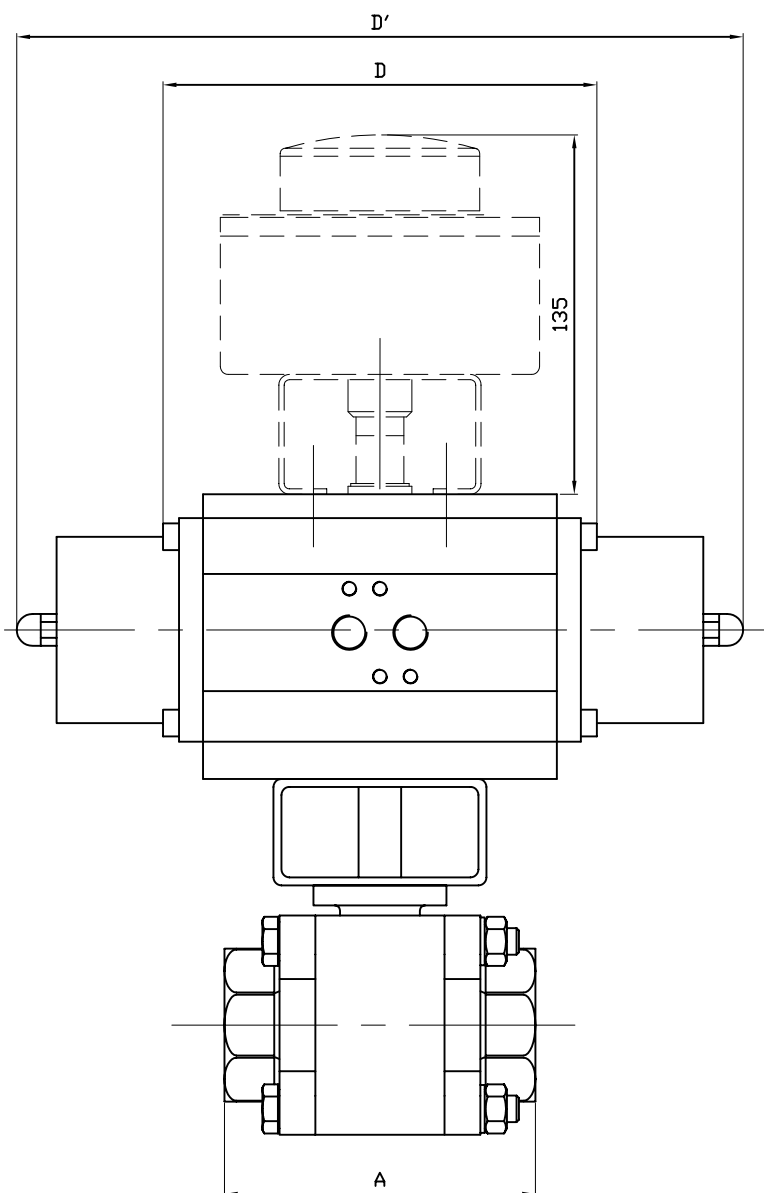
- | | | | |
|--|--|---|-------------------------------------|
| 1• Body - Aluminium Hard Anodized | 8• Pinion Washer - Stainless Steel | 23• Centering Ring - Nickel Plated Carbon Steel | 111• *O-Ring - NBR |
| 2• Piston - Aluminium | 10• *Upper Pinion Bearing - Polyamide PA 6,6
Size 500 & greater in 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
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



DN	1/4" - 3/8"		1/2"		3/4"		1"		1 1/4"		1 1/2"		2"	
ACTREG	20 DE	20 SE	20 DE	20 SE	20 DE	40 SE	20 DE	40 SE	20 DE	80 SE	40 DE	80 SE	80 DE	130 SE
A	65		72		86		105		111		127		145	
B	135	135	136	136	138	157*	142	161	147	188	191**	213**	238**	247**
C	76	76	76	76	76	90	76	90	76	111	90	111	111	121
D/D'	128	210	128	210	128	230	128	230	128	260	143	260	162	270

** : montage avec arcade de 60

Informations données à titre indicatif et sous réserve de modifications éventuelles

Ech:	Date :16/06/2004	Dessiné par : F.G.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
Actionneur ACTREG + BFC Vanne à sphère 702-703				Matière :		
				Poids (Kg) :		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 831		