

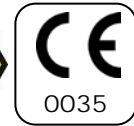
# 702-703XS-F VALVE WITH SA ELECTRIC ACTUATOR

## CHARACTERISTICS

The 702-703 XS-F + SA valve is a ball valve dedicated to the automatic opening/shut off of industrial uncharged fluids below 137 bar and 220 °C. Its 3-piece, full bore, double sealed (body and stem), antistatic and firesafe construction make it possible for use in the oil and gas industry. This valve has the Firesafe, EC and ATEX certifications. The ISO 5211 pad allows a simple mounting of the SA actuator. It is perfectly suitable for an indoor or outdoor industrial use.

## AVAILABLE ITEMS

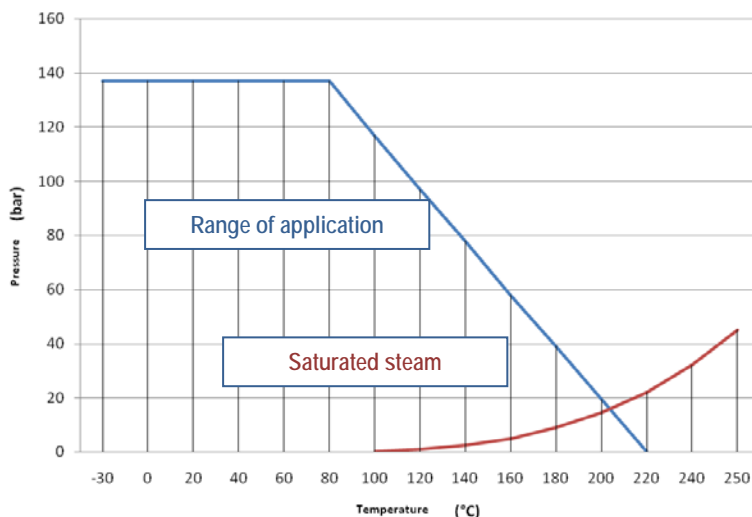
702XS-F: carbon steel body  
 703XS-F: stainless steel body  
 Size: ¼" to 1" ½  
 BSP and NPT threaded connections  
 SW and BW connections  
 Voltage 12 V DC, 24 V AC/DC and 230 V AC



With SA-X

## LIMITS OF USE

Max. allowable pressure (PS)	137 bar
Min./max. allowable temperature (TS)	Steel: -20 °C / +220 °C Stainless steel: -30 °C / +220 °C
Saturated steam use	15 bar / +200 °C
Room temperature	-20 °C / +70 °C
Service	S2 – 70%



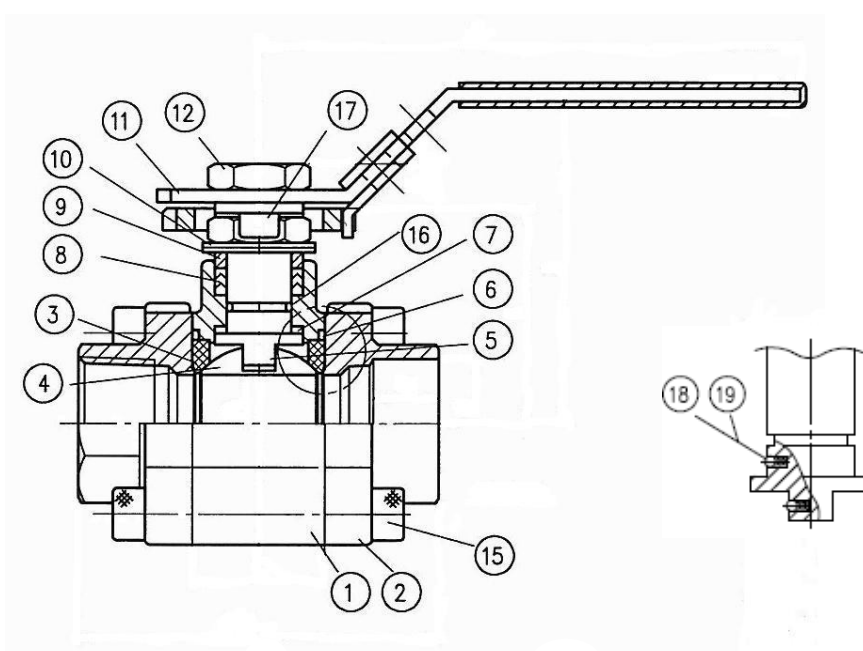
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# 702-703XS-F VALVE WITH SA ELECTRIC ACTUATOR

## DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE

	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment directive	¼" to 1" : N/A		Final testing	API 598
	1" ¼ to 2" : category III	TÜV#0035	Material certification	EN 10204
Conception	ANSI B16.34		Corrosion resistance	NACE MR-0175
Shell design	EN 12516-1		Firesafe	API 607/4
Alloy grade	EN 1503-2		Actuator attachments	ISO 5211
ATEX directive	II 2G/D Tx zones 1,2,21 and 22	SIRA #0518	BSP threaded standard	ISO 228-1
	EN 13463-1			



## CONSTRUCTION

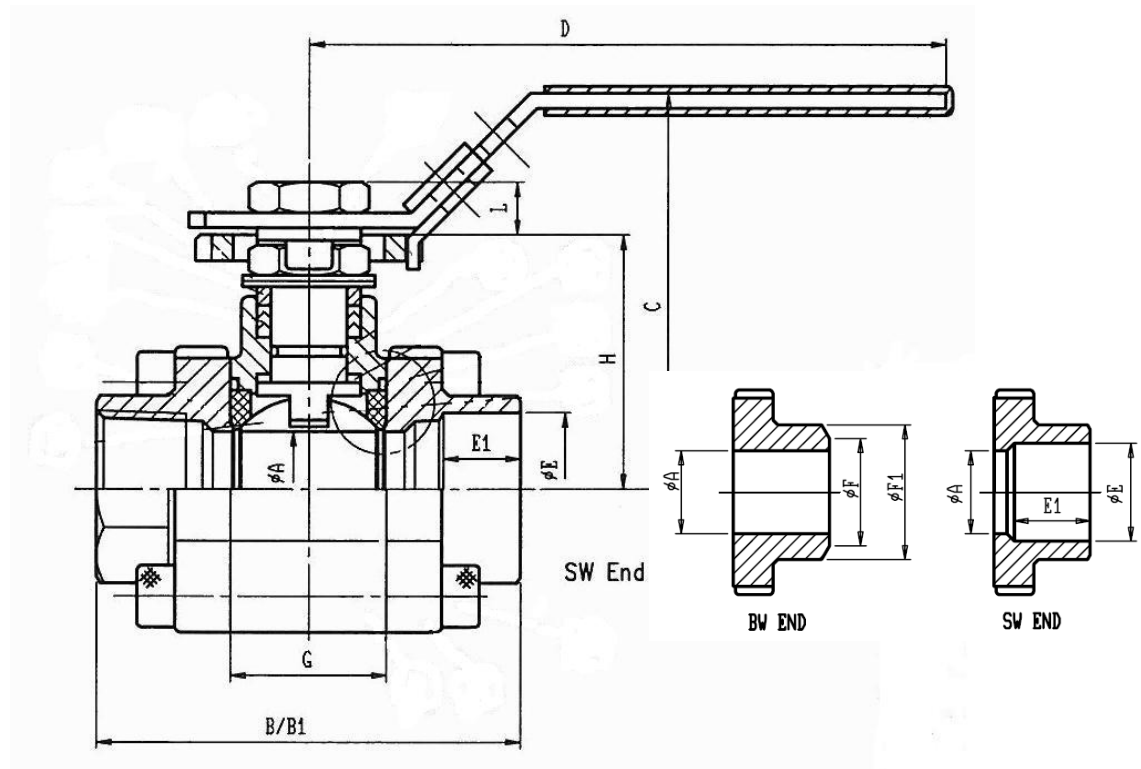
#	Item	Steel	Stainless steel	#	Item	Steel	Stainless steel
1	Body	Carbon steel 1.0619	Stainless steel 1.4408	10	Belleville spring washer		Stainless steel 301
2	Ends	Carbon steel 1.0619	Stainless steel 1.4408	11	Lever		Stainless steel 304
3	Seats	PTFE + 50% stainless steel		12	Lever nut		Stainless steel 304
4	Ball	Stainless steel 316		13	End stop		Stainless steel 304
5	Stem	Stainless steel 316		14	Sleeve		PVC
6	Body gaskets	Graphite		15	Screw		ISO 898 12.9
7	Washer	PTFE + 50% stainless steel		16	O-ring		FKM
8	Gland packing	Graphite		17	Lock out device		Stainless steel 304
9	Washer	Stainless steel 304		18	Antistatic ball		Stainless steel 316
				19	Spring		Stainless steel 316

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# 702-703XS-F VALVE WITH SA ELECTRIC ACTUATOR

## DIMENSIONS (mm)



DN	½"	¾"	1"	1" ¼	1" ½	2"
A	16	20	24,5	32	38	50
B (SW)	75	80	90	110	120	140
B1 (BW)	75	90	100	110	125	150
C	70.9	73.4	84.1	89.3	109.5	118.9
D	110	110	135	135	165	165
E	21.8	27.2	33.9	42.7	48.8	61.2
E1	11.2	14.3	15.8	17.5	19.1	21.3
F (BW)	17	22	28	37	43	54
F1 (BW)	21.3	26.9	33.7	42.4	48.3	60.3
G	25.2	27.7	33	41.2	49.3	63.6
H	42.3	44.8	54	59.2	73.5	82.9
L	8	8	10	10	14.8	14.8

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# 702-703XS-F VALVE WITH SA ELECTRIC ACTUATOR

## ACTUATION WITH SA

Suggested standard SA actuation under the following conditions:

- Electric actuator with an IP 67 epoxy coated aluminium enclosure and steel gears
- A minimum 1.3 safety factor compared with the valve nominal torque rating,
- A maximum pressure differential up/downstream of 10 bar (=ΔP)






Direct mounting of the electric actuator

DN	Actuator	Power	Intensity 230 V AC	Intensity 24 V AC/DC	Operating Time*	Standard equipment of the actuator
15	SA05	6 W	28 mA	1.8 mA	17 s	2 adjustable limit switches 2 dry auxiliary switches 2 W anti-condensation heater Actuator thermal cut-out Manual override by key Backlit position indicator (except for the SA-X version) Electrical connection: 2 gland packs. M20x1.5
20	SA05	6 W	28 mA	1.8 mA	17 s	
25	SA05	6 W	28 mA	1.8 mA	17 s	
32	SA05	6 W	28 mA	1.8 mA	17 s	
40	SA05	6 W	28 mA	1.8 mA	17 s	
50	Refer to 702-703XS + NA					

\*Unloaded operating time given for information purpose only. May vary depending on the medium  
For any other working conditions, please contact us.

## ACTUATION OPTIONS

There are many different options, please contact our commercial department.

1	2	3	4	5
SA05S: Low speed electric actuator 70 s	SA05PCU: Regulation actuator 4-20 mA or 0-10 V	SA05RBP: Safety actuator with an integrated battery emergency shutdown	SA05 X: Actuator for use in ATEX zones 1 and 2	SR05: Safety spring return actuator
				
6	SAPUI electric actuator with feedback potentiometer			
7	Thermal dispersion bracket for high temperature fluids			
8	100 mm high stem extension for pipe insulation			
9	Electric actuator sized for a maximum pressure differential up/downstream over 10 bar (=ΔP)			
10	NA electric actuator with a declutchable manual override by handwheel			

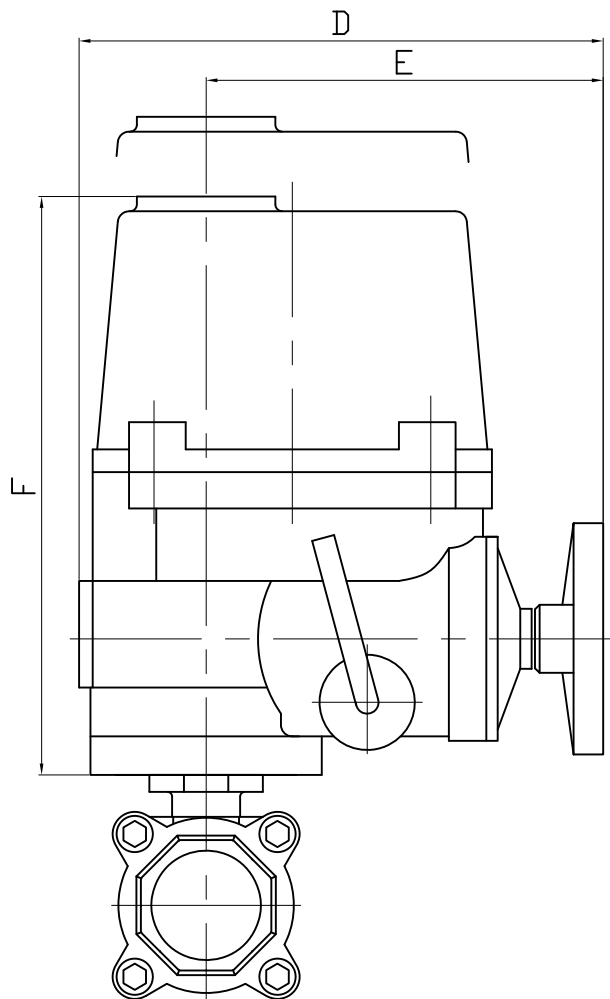
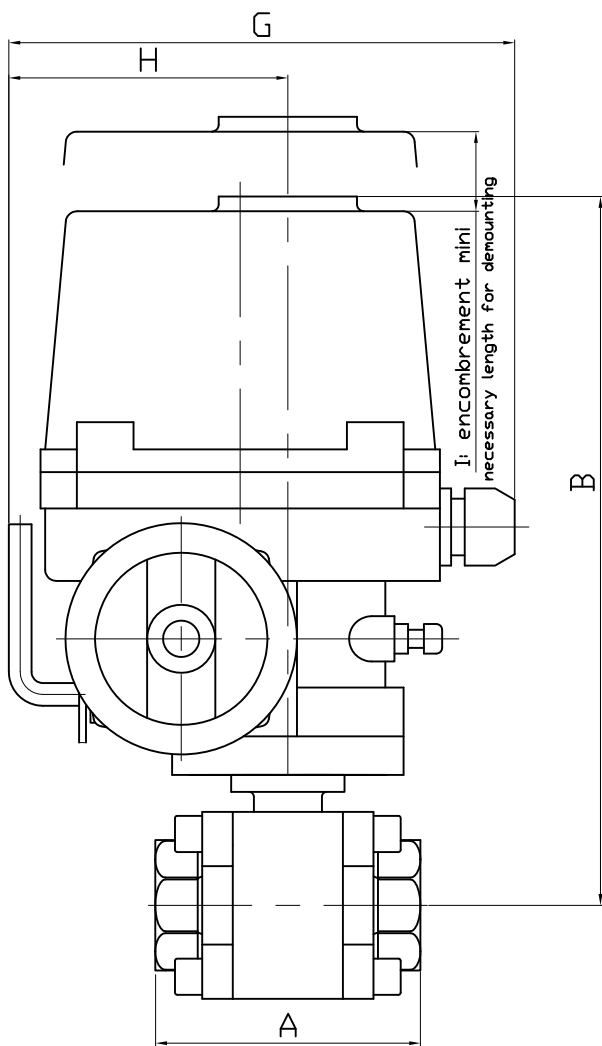
## ATEX ZONE INSTALLATION

It is compulsory to specify if the installation of the automatic valve 702-703XS+SA-X will take place in ATEX zones 1 or 2 while making the order. Our services will proceed to the mounting check, to a grounding strip installation and will edit a mounting certificate. Those operations are performed by our proper engineers. Please contact us for further details. It is also compulsory to follow the ATEX zone motorized valves mounting and maintenance special instructions. The ATEX gland packs and sealing plugs are not provided. Please use the following codes:

ATEX aluminium gland pack M20x1.5	Code 980179	ATEX aluminium sealing plugs M20x1.5	Code 980180
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DN	2"
SERVO	NA09
A	140
B	338
D	231
E	175
F	255
G	223
H	113
I	108
KG	17.6

Informations données à titre indicatif et sous réserve de modifications éventuelles  
 data subject to alteration

Ech: /	Date :20/09/2012	Dessiné par : E.D.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 702XS-703XS 'F'/BALL VALVE 702XS-703XS 'F' + SERVOMOTEUR NA/ELECTRIC ACTUATOR NA				Matière :		
				Poids (Kg) :		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 1147		

# ELECTRIC ACTUATOR SA05

## GENERAL DESCRIPTION

The SA05 electric actuator is dedicated to the actuation of industrial ¼ turn valve. The torque value is 50 Nm. With a compact design, an IP 67 cast aluminium enclosure and an epoxy protection, the SA electric actuator is especially adapted to the actuation of ball valves and butterfly valves in outdoor or indoor areas. The SA05 is equipped with a visual 3D position indicator and a manual override driven by an Allen key. It complies with the EN 15714-2 standard.

## AVAILABLE ITEMS

Voltage: 230 V AC (50-60 Hz), 24 V AC/DC and 12 V DC



## LIMITS OF USE

Protection rating	IP 67
Temperature range	-20 °C / +70 °C
Service	S2 - 70%

## MECHANICAL CHARACTERISTICS

Gears	Treated steel pinions
Torque	50 Nm
Rotation angle	90° +/-5°
Decutching	N/A
Manual override	Allen key (except for SA05S)



Electric actuator	SA05			SA05S	
Voltage	230 V AC	24 V AC/DC	12 V DC	230 V AC	24 V AC/DC
Torque	50 Nm				
Operating time	17 s	17 s	17 s	100 s	100 s
ISO 5211 pad	F03/F05/F17 star 14				

## ELECTRICAL CHARACTERISTICS

Motor protection	Thermal cut-out	Anti-condensation	2 W heater
Limit switches	2 adjustable switches	Electrical connection	2 gland packs M20x1.5
Auxiliary switches	2 adjustable dry switches		

Electric actuator	SA05			SA05S	
Voltage	230 V AC	24 V AC/DC	12 V DC	230 V AC	24 V AC/DC
Power	6 W	15 W	15 W	6 W	6 W
Intensity	0.24 A	1.8 A	3.6 A	0.24 A	1.8 A

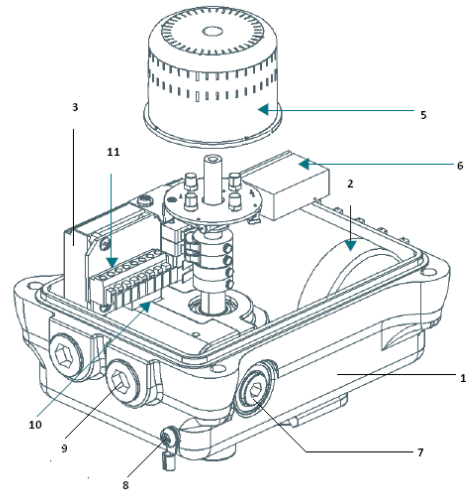
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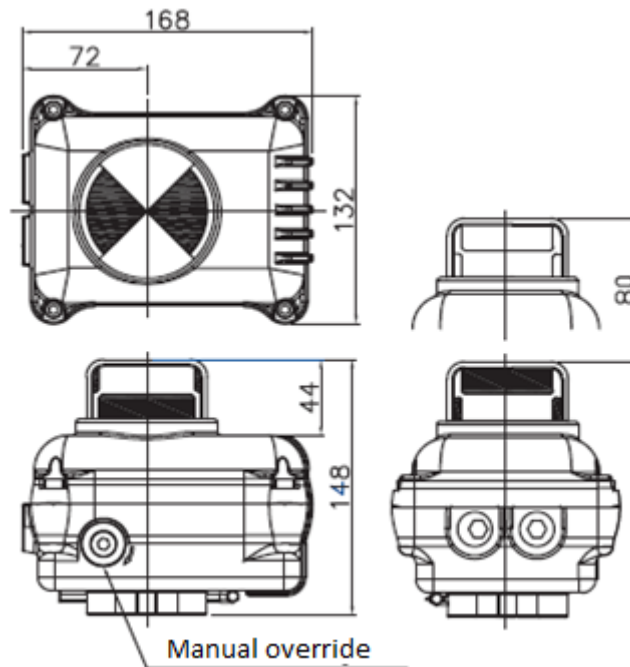
# ELECTRIC ACTUATOR SA05

## CONSTRUCTION


1	Enclosure	Polyester coated aluminium
2	Electric motor	
3	Gear	Treated steel pinions
4	Cover	Polyester coated aluminium
5	Position indicator	Polycarbonate plastic
6	Condenser	
7	Manual override	
8	Connection to ground	
9	Cable inlet	
10	Anti-condensation heater	
11	Terminal block	



## DIMENSIONS (mm)



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# ELECTRIC ACTUATOR SA05

## WIRING SCHEME 230 V AC

1	Common	<p>                     CLS : CLOSE LIMIT SWITCH (250VCA 3A)                      OLS : OPEN LIMIT SWITCH (250VCA 3A)                      ACLS : AUX. CLOSE LIMIT SWITCH (250VCA 3A)                      AOLS : AUX. OPEN LIMIT SWITCH (250VCA 3A)                      TP : THERMAL PROTECTOR                 </p>
2	Anti-condensation heater	
3	Closing control	
4	Opening control	
5	Auxiliary switch closing	
6	Auxiliary switch closing	
7	Auxiliary switch opening	
8	Auxiliary switch opening	

## WIRING SCHEME 24 V AC/DC

1	Common or +	<p>                     CLS : CLOSE LIMIT SWITCH (250VCA 3A)                      OLS : OPEN LIMIT SWITCH (250VCA 3A)                      ACLS : AUX. CLOSE LIMIT SWITCH (250VCA 3A)                      AOLS : AUX. OPEN LIMIT SWITCH (250VCA 3A)                      TP : THERMAL PROTECTOR                      RM : MOTOR REGULATION                 </p>
2	Closing control	
3	Opening control	
4	Auxiliary switch closing	
5	Auxiliary switch opening	
6	Auxiliary common	
7-8	Anti-condensation heater power supply	

## OPTIONS

1	SA05X: ATEX area version
2	SA05PIU: feedback potentiometer version
3	SA05CPT: 4-20 mA position transmitter version
4	SA05PCU: 0-10, 2-10 V, 2-20 mA, 4-20 mA regulation card version
5	SA05LCU: local control version
6	SA05RBP: integrated battery emergency shutdown device version

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