

736-746XS VALVE WITH SA05 / SA-X05 ELECTRIC ACTUATOR

CHARACTERISTICS

The 736XS (steel) and 746XS (stainless steel) + SA05 2-way ball valves are dedicated to the automatic shut-off of industrial fluids. With their 3-piece and external bolts construction, they are easy to dismantle for maintenance. This full bore ball valve has an antistatic device, a gland pack double tightness and is certified according to the ATEX and the EC standards (with SA-X). The ISO 5211 pad enables the direct mounting of the SA05 electric actuator. It is perfectly adapted for an indoor or outdoor industrial use.



AVAILABLE ITEMS

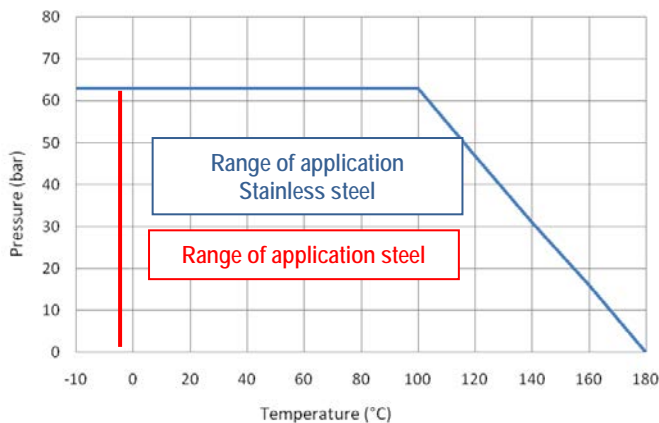
Size ¼" to 2"

Voltages: 24 V DC, 24 V AC and 230 V AC

Attachment	BSP	SW	BW
Steel	736XS	735XS	734XS
Stainless steel	746XS	743XS	745XS

LIMITS OF USE

Material	Steel	Stainless steel
Max. allowable pressure (PS)	63 bar (20 °C)	
Min./max. allowable temperature (TS)	-25 °C / +180 °C	-40 °C / +180 °C
Room temperature	-20 °C / +70 °C	
Service	S2 – 50%	



DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE

	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment Directive	¼" to 1" : excluded		Valve testing	EN 12266
	1" ¼ to 2" : category III	TÜV #0035	Material certificate	EN 10204
Size	EN 12516-1		Actuator attachment	ISO 5211
Alloy grade	EN 1503-1			
ATEX Directive	Valve	SIRA #0518	II 2G/D Tx for zones 1,2,21 and 22	
	Actuator (SA-X option)	KEMA #0344	II 2G EEx d II C T4 for zones 1 and 2	

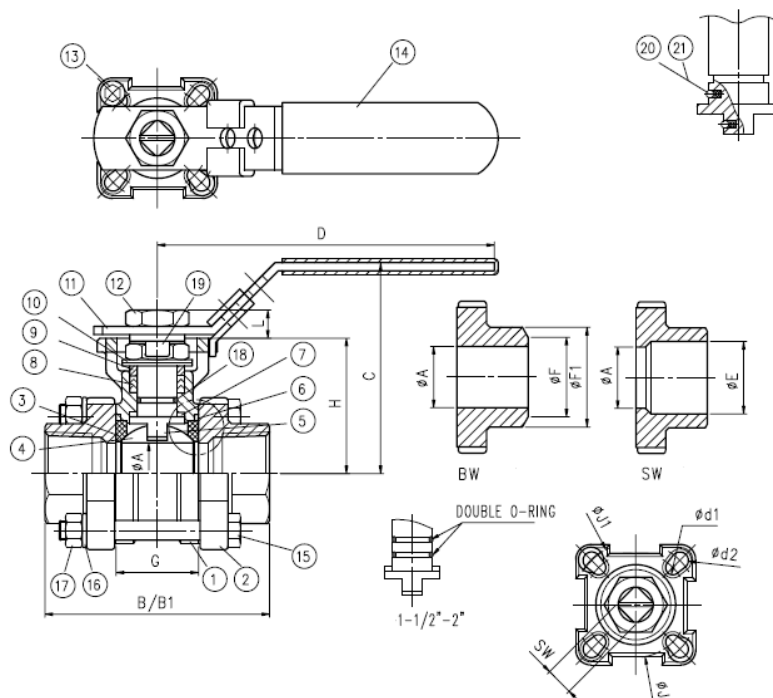
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		Ref.	746XS+SA05 GB
		Rev.	1
		Date	03/2012

736-746XS VALVE WITH SA05 / SA-X05 ELECTRIC ACTUATOR

CONSTRUCTION

#	Item	Carbon steel	Stainless steel	#	Item	Carbon steel	Stainless steel
1	Body	Carbon steel A216 WCB/1.0619	Stainless steel A351 CF8M /1.4408	12	Nut	SS 304	SS 304
2	Ends	Carbon steel A216 WCB/1.0619	Stainless steel A351 CF8M /1.4408	13	End stop	SS 304	SS 304
3*	Seats	PTFE+15% Graphite	PTFE+15%Graphite	14	Sleeve	PVC	PVC
4	Ball	CF8M / 316	CF8M / 316	15	Bolts	SS 304	SS 304
5	Stem	SS 316	SS 316	16	Washer	SS 304	SS 304
6*	Body gasket	PTFE	PTFE	17	Nuts	SS 304	SS 304
7*	Washer	PTFE+15% Graphite	PTFE+15% Graphite	18*	O-ring	FKM	FKM
8*	Packing	PTFE	PTFE	19	Retaining ring	SS 304	SS 304
9	Spacer	SS 304	SS 304	20	Antistatic	SS 316	SS 316
10	B washer	SS 301	SS 301	21	Spring	SS 304	SS 304
11	Lever	SS 304	SS 304	*Items provided in the maintenance kit			



DIMENSIONS (mm)

DN	A	B (BSP)	B (SW)	B1 (BW)	C	D	E	F	F1	G	H	J1	SW
¼"	10	65	65	70	46.5	110	14	13	17.0	26.0	41.0	42	9
3/8"	12.5	65	65	70	46.5	110	14	13	17.0	24.5	42.3	42	9
½"	16	75	75	75	70.9	110	21.9	17	22.4	25.2	42.3	42	9
¾"	20	80	80	90	73.4	110	27.2	22	28.2	27.7	44.8	42	9
1"	24.5	90	90	100	84.1	135	34.0	28	33.7	33.0	54.0	50	11
1" ¼	32	110	110	110	89.3	135	42.7	37	44.0	41.2	59.2	50	11
1" ½	38	120	120	125	109.5	165	48.8	43	50.8	49.3	73.5	70	14
2"	50	140	140	150	118.9	165	61.3	54	62.6	63.6	82.9	70	14
2" ½	65	185	185	190	155.0	300	77.0	74	76.1	82.1	107.0	102	17
3"	80	205	205	220	165.0	335	90.0	83	88.9	95.8	117.3	102	17
4"	100	240	240	270	180.0	335	115.5	110	114.3	117.8	132.3	102	17

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736-746XS VALVE WITH SA05 / SA-X05 ELECTRIC ACTUATOR

ACTUATION WITH SA05

Suggested standard actuation for SA05 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
½ "	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 Declutching lever Manual override by key Backlit position indicator Electrical connection: 1 gland pack. M20x1.5
¾ "	SA05	6 W	28 mA	1.8 mA	17 s	
1"	SA05	6 W	28 mA	1.8 mA	17 s	
1" ¼	SA05	6 W	28 mA	1.8 mA	17 s	
1" ½	SA05	6 W	28 mA	1.8 mA	17 s	
2"	SA05	6 W	28 mA	1.8 mA	17 s	

*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: Slow closing electric actuator 100 s	SA05PCU: Regulation actuator 4-20 mA or 0-10 V	SA05RBP: Safety actuator with an integrated battery emergency shutdown	SA05X: 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 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			

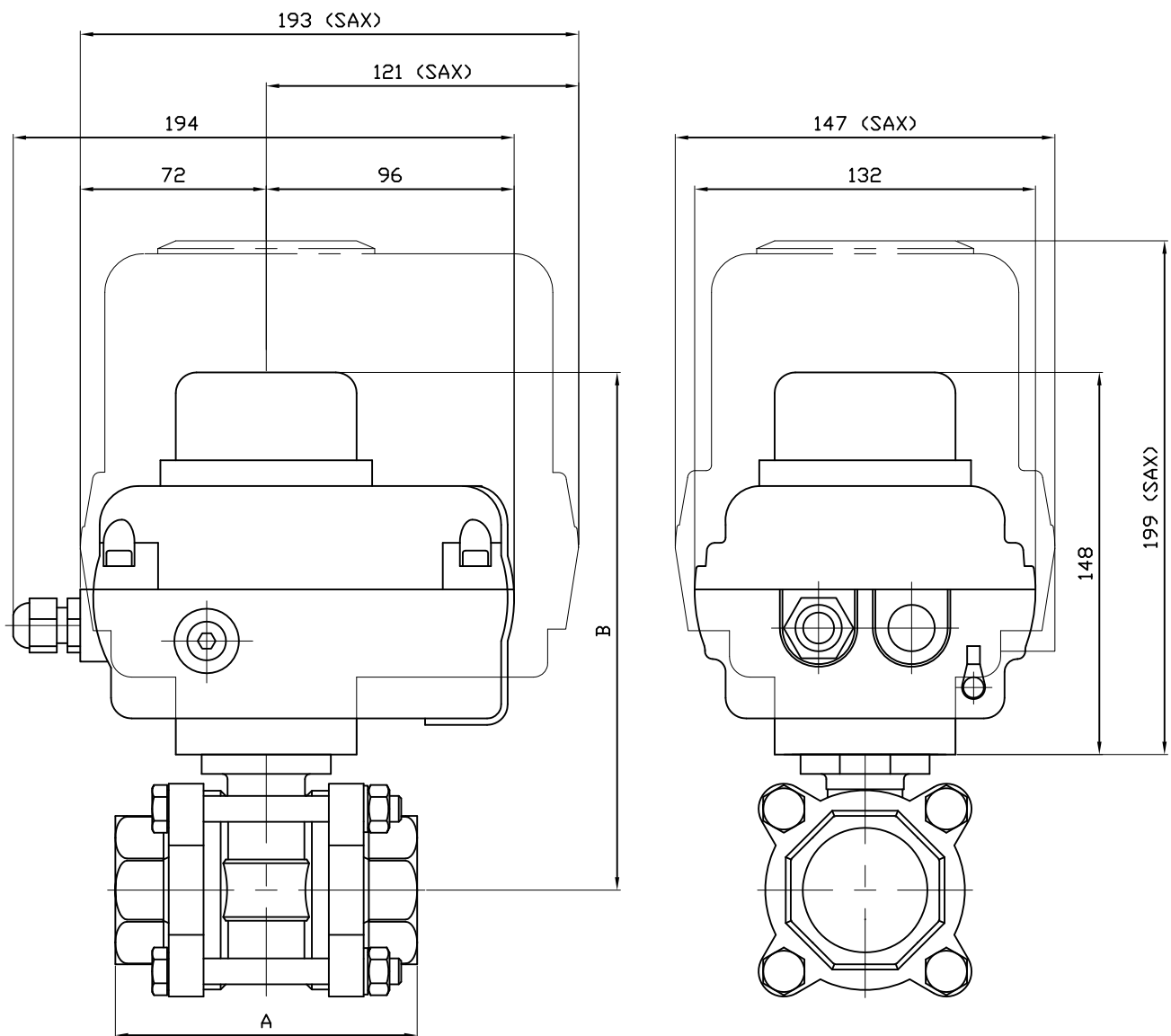
ATEX ZONES INSTALLATION

It is compulsory to specify if the installation of the automatic valve 736-746XS+SA-X05 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 mounting and maintenance special instructions for motorized valves. 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	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	75	80	90	110	120	140
B	190.3	193	202	207	221.5	231
B(SAX)	241.9	243.8	253	258.2	272.9	281.9
KG	3.42	3.72	4.19	4.92	5.91	7.52
KG(SAX)	5.62	5.92	6.39	7.12	8.1	9.72

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

				Ajout SA05X et poids	21/02/2012	A
Ech: /	Date :29/09/2006	Dessiné par : LL	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 736XS-746XS / BALL VALVE 736XS-746XS + SERVOMOTEUR SA05-SA05X / ELECTRIC ACTUATOR SA05-SA05X				Matière :		
				Poids <Kg> :		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 977A		

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
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
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

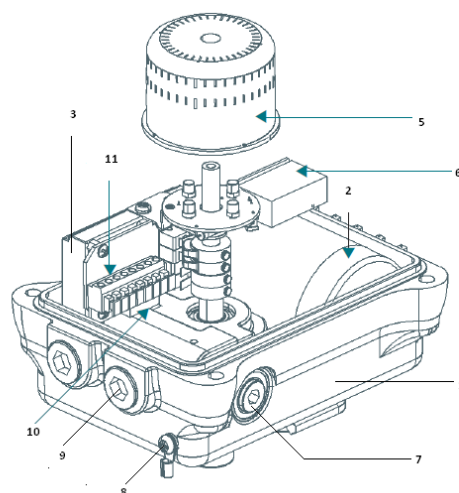
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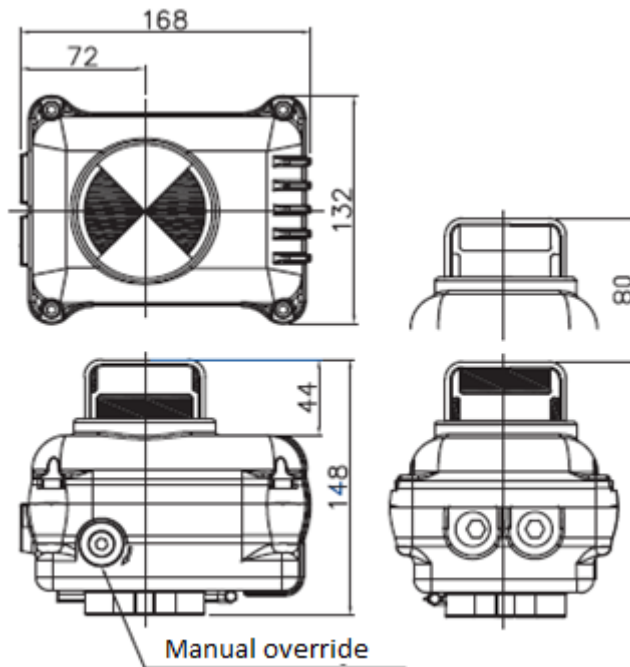
ELECTRIC ACTUATOR SA05

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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