	
DOC NUMBER: 569-DB7B-AIC-731-002		CLIENT NUMBER: PRD-AIC-DSH-042	
CLIENT: TAKEDA/BAXALTA			
PROJECT: BURITI EPCVM PROJECT			

DATA SHEET AUTOMATED BALL VALVE

2	29NOV2021	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
1	17NOV2021	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
0	17SEP2021	ISSUED FOR CONSTRUCTION	MAB	MAF	RSP
A	31MAR2021	60% DD ISSUE	MAB	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 2 de 20





AUTOMATED BALL VALVE

REV.: 2

DOCUMENT REVIEW CONTROL

Revision	A	0	1	2	3	4	Revision	A	0	1	2	3	4	Revision	A	0	1	2	3	4
Page							Page							Page						
1	X	X	X	X			41	X	X	X				81	X	X				
2	X	X	X	X			42	X	X	X				82	X	X				
3	X	X	X	X			43	X	X	X				83	X	X				
4	X	X	X	X			44	X	X	X				84	X	X				
5	X	X	X	X			45	X	X	X				85	X	X				
6	X	X	X	X			46	X	X	X				86	X	X				
7	X	X		X			47	X	X	X				87	X	X				
8	X	X		X			48	X	X	X				88	X	X				
9	X	X		X			49	X	X	X				89	X	X				
10	X	X		X			50	X	X	X				90	X	X				
11	X	X		X			51	X	X	X				91	X	X				
12	X	X		X			52	X	X	X				92	X	X				
13	X	X		X			53	X	X	X				93	X	X				
14	X	X		X			54	X	X	X				94						
15	X	X		X			55	X	X	X				95						
16	X	X		X			56	X	X	X				96						
17	X	X		X			57	X	X	X				97						
18	X	X		X			58	X	X	X				98						
19	X	X		X			59	X	X	X				99						
20	X	X		X			60	X	X	X				100						
21	X	X					61	X	X	X				101						
22	X	X					62	X	X	X				102						
23	X	X					63	X	X	X				103						
24	X	X					64	X	X	X				104						
25	X	X					65	X	X	X				105						
26	X	X					66	X	X	X				106						
27	X	X					67	X	X	X				107						
28	X	X					68	X	X	X				108						
29	X	X					69	X	X	X				109						
30	X	X					70	X	X	X				110						
31	X	X					71	X	X	X				111						
32	X	X					72	X	X	X				112						
33	X	X					73	X	X	X				113						
34	X	X					74	X	X	X				114						
35	X	X					75	X	X	X				115						
36	X	X					76	X	X	X				116						
37	X	X					77	X	X	X				117						
38	X	X					78	X	X	X				118						
39	X	X					79	X	X	X				119						
40	X	X					80	X	X	X				120						

The information contained in this document is the property of TESSLER Engenharia and is provided to the customer under the condition that they are not used for other purposes other than those contractually established.

 		 	
NUMBER: 569-DB7B-AIC-731-002		CLIENT NR: PRD-AIC-DSH-042	
TITLE AUTOMATED BALL VALVE			SHEET: 3 de 20 REV.: 2
REFERENCE DOCUMENTS			
7B-Z-0-0-01 PRD-AIC-LIS-046		PROCESS INDEX DRUG SUBSTANCE BUILDING 7B INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST	

GENERAL NOTES
<p>1 - Each key must be appropriate for the classified area as indicated on the data sheet. the instrument must comply with the ordinance inmetro 83, dated.</p> <p>2 - The nameplate must be in aisi 316, contain the tag, the serial number and the model of the level switch and be permanently attached to the respective instrument.</p> <p>3 - All electronic and electrical components subject to the attack of fungi and moisture must be tropicalized, that is, treated with a polyurethane cover or equivalent</p> <p>4 - The manufacture / construction can only be started after the drawings and other documents related to the part considered have been returned approved without any comments received.</p> <p>5 - Technical documents in general (drawings, technical specifications, data sheets and material requests, lists, manuals, etc.), must be identified.</p> <p>6 - Grounding rings must be provided in compatible material, with the instrument box and easy access for assembly, being at least AISI 316.</p> <p>7 - For all instruments, they must be classified as a type of protection compatible with the priority of the area. If the enclosure requires certificates regarding the type and degree of protection, both proofs must be explained in the same certificate. The certificates must be issued by INMETRO or accredited body.</p>

REVISION 0 - NOTES
1- REVISED AS PER INSTRUMENT LIST NUMBER PRD-AIC-LIS-010_B_PCS_INSTRUMENT_INDEX AND BACKLOG NUMBER 99000-184.0 2021.03.30 - A&IC DOCUMENTS - COMMENTS_REV.01
REVISION 1 - NOTES
1 - ACCORDING NEW ARQUITECTURE UPDATED
REVISION 2 - NOTES
1 - ACCORDING TO LINE SPECIFICATION - SS3 TO SS10
2 - ADDED TAG ACCORDING TO PID REV 0.

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 4 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-370220					
	2	SERVICE		WATER LOOP 1, RETURN CHILLED					
	3	P&ID		7B-Z-0-2-34					
	4	LINE SIZE	LINE Nº	2"	2"GW0R-370221-SS5-CC				
	5	VALVE TYPE		GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		FULL PORT					
	10	BODY SIZE		2"					
	11	MATERIAL PIPE, CLASS.		SS, SCH.40S, ASTM A312 Gr.TP304L.SEMALESS, ASME B36.19					
	12	END CONNECTION, AND TYPE.		SS, SCH 40S, PL, ASTM A403 WP304L, ASME B16.9					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		SS, SCH 40S, PL, ASTM A403 WP304L, ASME B16.9					
HANDLE	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
ACTUATOR	22	EXTENDED		-					
	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
ACCESSORIES	31	ENCLOSURE		MANUFACTURER STANDARD					
	32	SOLENOID VALVE		-					
	33	ELETRICAL CONNECTION		-					
	34	VOLTAGE		-					
	35	INDICATION		-					
	36	LIMIT SWITCH OPEN		-					
	37	LIMIT SWITCH CLOSED		-					
	38	MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		WATER		LIQUID		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	1,5	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	10	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION		- kg/m³					
		VISCOSITY @ OPERATING CONDITION		- Cp					
		FLUID CONDUCTIVITY		- µS/cm²					
		INCRUSTATION		-					
		SUSPENDE SOLIDS (%)		-					
		MAXIMUM LOSS OF LOAD ALLOWED		-					
		MANUFACTURER		FISHER OR SIMILAR					
	MODEL								

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 5 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-370320					
	2	SERVICE		WATER LOOP 1, RETURN CHILLED					
	3	P&ID		7B-Z-0-2-35					
	4	LINE SIZE	LINE N°	2"	2"GW0R-370321-SS5-CC				
	5	VALVE TYPE		GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		FULL PORT					
	10	BODY SIZE		2"					
	11	MATERIAL PIPE, CLASS.		SS, SCH.40S, ASTM A312 Gr.TP304L.SEMALESS, ASME B36.19					
	12	END CONNECTION, AND TYPE.		SS, SCH 40S, PL, ASTM A403 WP304L, ASME B16.9					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		SS, SCH 40S, PL, ASTM A403 WP304L, ASME B16.9					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		WATER		LIQUID		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	1,5	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	10	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION				- kg/m³			
		VISCOSITY @ OPERATING CONDITION				- Cp			
		FLUID CONDUCTIVITY				- µS/cm²			
		INCRUSTATION		-		-			
		SUSPENDE SOLIDS (%)		-		-			
		MAXIMUM LOSS OF LOAD ALLOWED		-		-			
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 6 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-371002					
	2	SERVICE		CIP SYSTEM Nº2 RETURN					
	3	P&ID		7B-Z-0-2-40					
	4	LINE SIZE	LINE Nº	1"	1"-SFIC-371002-SS10-PP				
	5	VALVE TYPE		GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		FULL PORT					
	10	BODY SIZE		1"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		CIP		GAS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	2	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	80	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION				- kg/m³			
		VISCOSITY @ OPERATING CONDITION				- Cp			
		FLUID CONDUCTIVITY				- µS/cm²			
		INCRUSTATION				-			
		SUSPENDE SOLIDS (%)				-			
		MAXIMUM LOSS OF LOAD ALLOWED				-			
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042





TITLE

SHEET: 7 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-371102					
	2	SERVICE		CIP SYSTEM Nº2 RETURN					
	3	P&ID		7B-Z-0-2-40					
	4	LINE SIZE	LINE Nº	1"	1"-SFIC-371002-SS10-PP				
	5	VALVE TYPE		GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		FULL PORT					
	10	BODY SIZE		1"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE			FLUID	PHYSICAL STATUS		CIP		GAS	
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	2	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	80	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION		- kg/m³					
		VISCOSITY @ OPERATING CONDITION		- Cp					
		FLUID CONDUCTIVITY		- µS/cm²					
		INCRUSTATION		-					
		SUSPENDE SOLIDS (%)		-					
		MAXIMUM LOSS OF LOAD ALLOWED		-					
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

 				 				
NUMBER: 569-DB7B-AIC-731-002				CLIENT NR: PRD-AIC-DSH-042				
TITLE						SHEET: 8 de 20		
AUTOMATED BALL VALVE						REV.: 2		
GENERAL	1 INSTRUMENT TAG NUMBER			7B-XV-260001				
	2 SERVICE			LIQUID-NITROGEN-DISTRIBUTION				
	3 P&ID			7B-Z-0-2-74				
	4 LINE SIZE		LINE Nº	1/2"	1/2"-LN2-260001-VJP			
	5 VALVE TYPE			GLOBE				
	6 AREA CLASSIFICATION			NOT CLASSIFIED				
	7 ENCLOSURE CLASSIFICATION			IP-65				
	8 CERTIFICATES			SEE NOTE 7 - PAGE 3				
BODY	9 TYPE BODY			FULL PORT				
	10 BODY SIZE			1"				
	11 MATERIAL PIPE, CLASS.			316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.				
	12 END CONNECTION, AND TYPE.			316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.				
	13 BODY MATERIAL			STAINLESS STEEL AISI 316L				
	14 SEAL / SEAL TYPE			PTFE				
	15 FULL FLOW BALL, YES / NO			YES				
	16 BALL & TRIM MATERIAL			STAINLESS STEEL AISI 316L				
	17 PIPING MATERIAL SPECIFICATION			STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS				
	18 BLOWOUT PROOF STEM			MANUFACTURER STANDARD				
HANDLE	19 TYPE			-				
	20 COLOR			-				
	21 LOCKING YES / NO			-				
	22 EXTENDED			-				
ACTUATOR	23 TUPE OF ACTUATOR			PNEUMATIC, SINGLE ACTING				
	24 FAIL POSITION			CLOSE				
	25 CLOSE AT (psig) SPRING			0 bar				
	26 OPEN AT (psig)			6 bar				
	27 PNEUMATIC CONECTION			1/4" BSPF				
	28 BODY COLOR			MANUFACTURER STANDARD				
	29 HOUSING MATERIAL			MANUFACTURER STANDARD				
	30 ELETRICAL CLASS			-				
	31 ENCLOSURE			MANUFACTURER STANDARD				
	ACCESSORIES	32 SOLENOID VALVE			-			
33 ELETRICAL CONNECTION			-					
34 VOLTAGE			-					
35 INDICATION			-					
36 LIMIT SWITCH OPEN			-					
37 LIMIT SWITCH CLOSED			-					
38 MOUNTING KIT			-					
SERVICE		FLUID		PHYSICAL STATUS		N2		LIQUID
	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	-	bar-g	
	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	-80	°C	
	PROJECT FLOW			-				
	DESIGN PRESSURE		DESIGN TEMPERATURE		- bar-g		- °C	
	DENSITY @ OPERATING CONDITION			- kg/m³				
	VISCOSITY @ OPERATING CONDITION			- Cp				
	FLUID CONDUCTIVITY			- µS/cm²				
	INCRUSTATION			-				
	SUSPENDE SOLIDS (%)			-				
	MAXIMUM LOSS OF LOAD ALLOWED			-				
	MANUFACTURER			FISHER OR SIMILAR				
	MODEL							

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042





TITLE





SHEET: 9 de 20





AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-550160				
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY				
	3	P&ID		7B-Z-0-2-11				
	4	LINE SIZE	LINE N°	1/2"-GOP-240006-SS10-NI		1/2"-GSP-550140-SS10-NI		
	5	VALVE TYPE		ANGLE SEAT GLOBE				
	6	AREA CLASSIFICATION		NOT CLASSIFIED				
	7	ENCLOSURE CLASSIFICATION		IP-65				
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3				
BODY	9	TYPE BODY		ANGLE SEAT GLOBE				
	10	BODY SIZE		1/2"				
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.				
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.				
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L				
	14	SEAL / SEAL TYPE		PTFE				
	15	FULL FLOW BALL, YES / NO		YES				
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L				
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS				
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD				
HANDLE	19	TYPE		-				
	20	COLOR		-				
	21	LOCKING YES / NO		-				
	22	EXTENDED		-				
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING				
	24	FAIL POSITION		CLOSE				
	25	CLOSE AT (psig) SPRING		0 bar				
	26	OPEN AT (psig)		6 bar				
	27	PNEUMATIC CONECTION		1/4" BSPF				
	28	BODY COLOR		MANUFACTURER STANDARD				
	29	HOUSING MATERIAL		MANUFACTURER STANDARD				
	30	ELETRICAL CLASS		-				
	31	ENCLOSURE		MANUFACTURER STANDARD				
	ACCESSORIES	32	SOLENOID VALVE		-			
33		ELETRICAL CONNECTION		-				
34		VOLTAGE		-				
35		INDICATION		-				
36		LIMIT SWITCH OPEN		-				
37		LIMIT SWITCH CLOSED		-				
38		MOUNTING KIT		-				
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS	
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C
		PROJECT FLOW				-		
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C	
		DENSITY @ OPERATING CONDITION				- kg/m³		
		VISCOSITY @ OPERATING CONDITION				- Cp		
		FLUID CONDUCTIVITY				- µS/cm²		
		INCRUSTATION				-		
		SUSPENDE SOLIDS (%)				-		
		MAXIMUM LOSS OF LOAD ALLOWED				-		
		MANUFACTURER				FISHER OR SIMILAR		
	MODEL							

 				 			
NUMBER: 569-DB7B-AIC-731-002				CLIENT NR: PRD-AIC-DSH-042			
TITLE						SHEET: 10 de 20	
AUTOMATED BALL VALVE						REV.: 2	
GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-550161			
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY			
	3	P&ID		7B-Z-0-2-11			
	4	LINE SIZE	LINE Nº	1/2"-CAP-550145-SS10-N		1/2"-GOV-550141-SS10-NI	
	5	VALVE TYPE		ANGLE SEAT GLOBE			
	6	AREA CLASSIFICATION		NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION		IP-65			
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3			
BODY	9	TYPE BODY		ANGLE SEAT GLOBE			
	10	BODY SIZE		1/2"			
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.			
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.			
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L			
	14	SEAL / SEAL TYPE		PTFE			
	15	FULL FLOW BALL, YES / NO		YES			
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L			
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS			
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD			
HANDLE	19	TYPE		-			
	20	COLOR		-			
	21	LOCKING YES / NO		-			
	22	EXTENDED		-			
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING			
	24	FAIL POSITION		CLOSE			
	25	CLOSE AT (psig) SPRING		0 bar			
	26	OPEN AT (psig)		6 bar			
	27	PNEUMATIC CONECTION		1/4" BSPF			
	28	BODY COLOR		MANUFACTURER STANDARD			
	29	HOUSING MATERIAL		MANUFACTURER STANDARD			
	30	ELETRICAL CLASS		-			
	31	ENCLOSURE		MANUFACTURER STANDARD			
	ACCESSORIES	32	SOLENOID VALVE		-		
33		ELETRICAL CONNECTION		-			
34		VOLTAGE		-			
35		INDICATION		-			
36		LIMIT SWITCH OPEN		-			
37		LIMIT SWITCH CLOSED		-			
38		MOUNTING KIT		-			
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS
	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-
	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g
	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C
	PROJECT FLOW			-			
	DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C	
	DENSITY @ OPERATING CONDITION			- kg/m³			
	VISCOSITY @ OPERATING CONDITION			- Cp			
	FLUID CONDUCTIVITY			- µS/cm²			
	INCRUSTATION			-			
	SUSPENDE SOLIDS (%)			-			
	MAXIMUM LOSS OF LOAD ALLOWED			-			
	MANUFACTURER			FISHER OR SIMILAR			
	MODEL						

 				 			
NUMBER: 569-DB7B-AIC-731-002				CLIENT NR: PRD-AIC-DSH-042			
TITLE						SHEET: 11 de 20	
AUTOMATED BALL VALVE						REV.: 2	
GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-550162			
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY			
	3	P&ID		7B-Z-0-2-11			
	4	LINE SIZE	LINE Nº	1/2"-CAP-550145-SS10-N		1/2"-GMIX-550144-SS10-NI	
	5	VALVE TYPE		ANGLE SEAT GLOBE			
	6	AREA CLASSIFICATION		NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION		IP-65			
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3			
BODY	9	TYPE BODY		ANGLE SEAT GLOBE			
	10	BODY SIZE		1/2"			
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.			
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.			
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L			
	14	SEAL / SEAL TYPE		PTFE			
	15	FULL FLOW BALL, YES / NO		YES			
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L			
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS			
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD			
HANDLE	19	TYPE		-			
	20	COLOR		-			
	21	LOCKING YES / NO		-			
	22	EXTENDED		-			
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING			
	24	FAIL POSITION		CLOSE			
	25	CLOSE AT (psig) SPRING		0 bar			
	26	OPEN AT (psig)		6 bar			
	27	PNEUMATIC CONECTION		1/4" BSPF			
	28	BODY COLOR		MANUFACTURER STANDARD			
	29	HOUSING MATERIAL		MANUFACTURER STANDARD			
	30	ELETRICAL CLASS		-			
	31	ENCLOSURE		MANUFACTURER STANDARD			
	ACCESSORIES	32	SOLENOID VALVE		-		
33		ELETRICAL CONNECTION		-			
34		VOLTAGE		-			
35		INDICATION		-			
36		LIMIT SWITCH OPEN		-			
37		LIMIT SWITCH CLOSED		-			
38		MOUNTING KIT		-			
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS
	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-
	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g
	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C
	PROJECT FLOW			-			
	DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C	
	DENSITY @ OPERATING CONDITION			- kg/m³			
	VISCOSITY @ OPERATING CONDITION			- Cp			
	FLUID CONDUCTIVITY			- µS/cm²			
	INCRUSTATION			-			
	SUSPENDE SOLIDS (%)			-			
	MAXIMUM LOSS OF LOAD ALLOWED			-			
	MANUFACTURER			FISHER OR SIMILAR			
	MODEL						

 				 				
NUMBER: 569-DB7B-AIC-731-002				CLIENT NR: PRD-AIC-DSH-042				
TITLE						SHEET: 12 de 20		
AUTOMATED BALL VALVE						REV.: 2		
GENERAL	1	INSTRUMENT TAG NUMBER			7B-XV-550163			
	2	SERVICE			CLEAN COMPRESSED AIR SUPPLY			
	3	P&ID			7B-Z-0-2-11			
	4	LINE SIZE	LINE Nº		3/4"-CAP-550142-SS10-NI	3/4"-CAP-550142-SS10-NI		
	5	VALVE TYPE			ANGLE SEAT GLOBE			
	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP-65			
	8	CERTIFICATES			SEE NOTE 7 - PAGE 3			
BODY	9	TYPE BODY			ANGLE SEAT GLOBE			
	10	BODY SIZE			3/4"			
	11	MATERIAL PIPE, CLASS.			316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.			
	12	END CONNECTION, AND TYPE.			316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.			
	13	BODY MATERIAL			STAINLESS STEEL AISI 316L			
	14	SEAL / SEAL TYPE			PTFE			
	15	FULL FLOW BALL, YES / NO			YES			
	16	BALL & TRIM MATERIAL			STAINLESS STEEL AISI 316L			
	17	PIPING MATERIAL SPECIFICATION			STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS			
	18	BLOWOUT PROOF STEM			MANUFACTURER STANDARD			
HANDLE	19	TYPE			-			
	20	COLOR			-			
	21	LOCKING YES / NO			-			
	22	EXTENDED			-			
ACTUATOR	23	TUPE OF ACTUATOR			PNEUMATIC, SINGLE ACTING			
	24	FAIL POSITION			CLOSE			
	25	CLOSE AT (psig) SPRING			0 bar			
	26	OPEN AT (psig)			6 bar			
	27	PNEUMATIC CONECTION			1/4" BSPF			
	28	BODY COLOR			MANUFACTURER STANDARD			
	29	HOUSING MATERIAL			MANUFACTURER STANDARD			
	30	ELETRICAL CLASS			-			
	31	ENCLOSURE			MANUFACTURER STANDARD			
	ACCESSORIES	32	SOLENOID VALVE			-		
33		ELETRICAL CONNECTION			-			
34		VOLTAGE			-			
35		INDICATION			-			
36		LIMIT SWITCH OPEN			-			
37		LIMIT SWITCH CLOSED			-			
38		MOUNTING KIT			-			
SERVICE			FLUID	PHYSICAL STATUS		AIR		GAS
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C
		PROJECT FLOW			-			
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C	
		DENSITY @ OPERATING CONDITION			- kg/m³			
		VISCOSITY @ OPERATING CONDITION			- Cp			
		FLUID CONDUCTIVITY			- µS/cm²			
		INCRUSTATION			-			
		SUSPENDE SOLIDS (%)			-			
		MAXIMUM LOSS OF LOAD ALLOWED			-			
		MANUFACTURER			FISHER OR SIMILAR			
		MODEL						

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 13 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-550164					
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID		7B-Z-0-2-11					
	4	LINE SIZE	LINE N°	1/2"-GMIX-550158-SS10-NI		1/2"-GMIX-550144-SS10-NI			
	5	VALVE TYPE		ANGLE SEAT GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		ANGLE SEAT GLOBE					
	10	BODY SIZE		1/2"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD						
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
ACCESSORIES	32	SOLENOID VALVE		-					
	33	ELETRICAL CONNECTION		-					
	34	VOLTAGE		-					
	35	INDICATION		-					
	36	LIMIT SWITCH OPEN		-					
	37	LIMIT SWITCH CLOSED		-					
	38	MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION				- kg/m³			
		VISCOSITY @ OPERATING CONDITION				- Cp			
		FLUID CONDUCTIVITY				- µS/cm²			
		INCRUSTATION				-			
		SUSPENDE SOLIDS (%)				-			
		MAXIMUM LOSS OF LOAD ALLOWED				-			
		MANUFACTURER		FISHER OR SIMILAR					
	MODEL								

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 14 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-550165					
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID		7B-Z-0-2-11					
	4	LINE SIZE	LINE N°	1/2"-GMIX-550159-SS10-NI		1/2"-GOP-550140-SS10-NI			
	5	VALVE TYPE		ANGLE SEAT GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		ANGLE SEAT GLOBE					
	10	BODY SIZE		1/2"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION				- kg/m³			
		VISCOSITY @ OPERATING CONDITION				- Cp			
		FLUID CONDUCTIVITY				- µS/cm²			
		INCRUSTATION				-			
		SUSPENDE SOLIDS (%)				-			
		MAXIMUM LOSS OF LOAD ALLOWED				-			
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042





TITLE

SHEET: 15 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-560160					
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID		7B-Z-0-2-13					
	4	LINE SIZE	LINE Nº	1/2"-GOP-560140-SS10-NI		1/2"-GOP-560140-SS10-NI			
	5	VALVE TYPE		ANGLE SEAT GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		ANGLE SEAT GLOBE					
	10	BODY SIZE		1/2"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION		- kg/m³					
		VISCOSITY @ OPERATING CONDITION		- Cp					
		FLUID CONDUCTIVITY		- µS/cm²					
		INCRUSTATION		-					
		SUSPENDE SOLIDS (%)		-					
		MAXIMUM LOSS OF LOAD ALLOWED		-					
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

   							
NUMBER: 569-DB7B-AIC-731-002			CLIENT NR: PRD-AIC-DSH-042				
TITLE				SHEET: 16 de 20			
AUTOMATED BALL VALVE				REV.: 2			
GENERAL	1 INSTRUMENT TAG NUMBER		7B-XV-560161				
	2 SERVIÇO		CLEAN COMPRESSED AIR SUPPLY				
	3 P&ID		7B-Z-0-2-13				
	4 LINE SIZE	LINE Nº	1/2"-GCO2-560141-SS10-NI	3/4"-GOV-560141-SS10-NI			
	5 VALVE TYPE		ANGLE SEAT GLOBE				
	6 AREA CLASSIFICATION		NOT CLASSIFIED				
	7 ENCLOSURE CLASSIFICATION		IP-65				
	8 CERTIFICATES		SEE NOTE 7 - PAGE 3				
BODY	9 TYPE BODY		ANGLE SEAT GLOBE				
	10 BODY SIZE		1/2"				
	11 MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.				
	12 END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.				
	13 BODY MATERIAL		STAINLESS STEEL AISI 316L				
	14 SEAL / SEAL TYPE		PTFE				
	15 FULL FLOW BALL, YES / NO		YES				
	16 BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L				
	17 PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS				
	18 BLOWOUT PROOF STEM		MANUFACTURER STANDARD				
HANDLE	19 TYPE		-				
	20 COLOR		-				
	21 LOCKING YES / NO		-				
	22 EXTENDED		-				
ACTUATOR	23 TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING				
	24 FAIL POSITION		CLOSE				
	25 CLOSE AT (psig) SPRING		0 bar				
	26 OPEN AT (psig)		6 bar				
	27 PNEUMATIC CONECTION		1/4" BSPF				
	28 BODY COLOR		MANUFACTURER STANDARD				
	29 HOUSING MATERIAL		MANUFACTURER STANDARD				
	30 ELETRICAL CLASS		-				
	31 ENCLOSURE		MANUFACTURER STANDARD				
	ACCESSORIES	32 SOLENOID VALVE		-			
33 ELETRICAL CONNECTION		-					
34 VOLTAGE		-					
35 INDICATION		-					
36 LIMIT SWITCH OPEN		-					
37 LIMIT SWITCH CLOSED		-					
38 MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS
	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-
	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g
	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C
	PROJECT FLOW			-			
	DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C	
	DENSITY @ OPERATING CONDITION			- kg/m³			
	VISCOSITY @ OPERATING CONDITION			- Cp			
	FLUID CONDUCTIVITY			- µS/cm²			
	INCRUSTATION			-			
	SUSPENDE SOLIDS (%)			-			
	MAXIMUM LOSS OF LOAD ALLOWED			-			
	MANUFACTURER			FISHER OR SIMILAR			
	MODEL						

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 17 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-560162					
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID		7B-Z-0-2-13					
	4	LINE SIZE	LINE Nº	1/2"-CAP-560180-SS10-NI	3/4"-GMIX-560178-SS10-NI				
	5	VALVE TYPE		ANGLE SEAT GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		ANGLE SEAT GLOBE					
	10	BODY SIZE		1/2"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION				- kg/m³			
		VISCOSITY @ OPERATING CONDITION				- Cp			
		FLUID CONDUCTIVITY				- µS/cm²			
		INCRUSTATION				-			
		SUSPENDE SOLIDS (%)				-			
		MAXIMUM LOSS OF LOAD ALLOWED				-			
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 18 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-560163					
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID		7B-Z-0-2-13					
	4	LINE SIZE	LINE Nº	1"-CAP-560142-SS10-NI		1"-CAP-560142-SS10-NI			
	5	VALVE TYPE		ANGLE SEAT GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		ANGLE SEAT GLOBE					
	10	BODY SIZE		1"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION				- kg/m³			
		VISCOSITY @ OPERATING CONDITION				- Cp			
		FLUID CONDUCTIVITY				- µS/cm²			
		INCRUSTATION				-			
		SUSPENDE SOLIDS (%)				-			
		MAXIMUM LOSS OF LOAD ALLOWED				-			
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 19 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-560164					
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID		7B-Z-0-2-13					
	4	LINE SIZE	LINE Nº	1"-CAP-560142-SS10-NI		3/4"-GMIX-560178-SS10-NI			
	5	VALVE TYPE		ANGLE SEAT GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		ANGLE SEAT GLOBE					
	10	BODY SIZE		1"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE		FLUID	PHYSICAL STATUS		AIR		GAS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION		- kg/m³					
		VISCOSITY @ OPERATING CONDITION		- Cp					
		FLUID CONDUCTIVITY		- µS/cm²					
		INCRUSTATION		-					
		SUSPENDE SOLIDS (%)		-					
		MAXIMUM LOSS OF LOAD ALLOWED		-					
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							

NUMBER: 569-DB7B-AIC-731-002

CLIENT NR: PRD-AIC-DSH-042

TITLE

SHEET: 20 de 20

AUTOMATED BALL VALVE

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		7B-XV-560165					
	2	SERVICE		CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID		7B-Z-0-2-13					
	4	LINE SIZE	LINE Nº	3/4"-GMIX-560179-SS10-NI	3/4"-GSP-560140-SS10-NI				
	5	VALVE TYPE		ANGLE SEAT GLOBE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP-65					
	8	CERTIFICATES		SEE NOTE 7 - PAGE 3					
BODY	9	TYPE BODY		ANGLE SEAT GLOBE					
	10	BODY SIZE		3/4"					
	11	MATERIAL PIPE, CLASS.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	12	END CONNECTION, AND TYPE.		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
	13	BODY MATERIAL		STAINLESS STEEL AISI 316L					
	14	SEAL / SEAL TYPE		PTFE					
	15	FULL FLOW BALL, YES / NO		YES					
	16	BALL & TRIM MATERIAL		STAINLESS STEEL AISI 316L					
	17	PIPING MATERIAL SPECIFICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
	18	BLOWOUT PROOF STEM		MANUFACTURER STANDARD					
HANDLE	19	TYPE		-					
	20	COLOR		-					
	21	LOCKING YES / NO		-					
	22	EXTENDED		-					
ACTUATOR	23	TUPE OF ACTUATOR		PNEUMATIC, SINGLE ACTING					
	24	FAIL POSITION		CLOSE					
	25	CLOSE AT (psig) SPRING		0 bar					
	26	OPEN AT (psig)		6 bar					
	27	PNEUMATIC CONECTION		1/4" BSPF					
	28	BODY COLOR		MANUFACTURER STANDARD					
	29	HOUSING MATERIAL		MANUFACTURER STANDARD					
	30	ELETRICAL CLASS		-					
	31	ENCLOSURE		MANUFACTURER STANDARD					
	ACCESSORIES	32	SOLENOID VALVE		-				
33		ELETRICAL CONNECTION		-					
34		VOLTAGE		-					
35		INDICATION		-					
36		LIMIT SWITCH OPEN		-					
37		LIMIT SWITCH CLOSED		-					
38		MOUNTING KIT		-					
SERVICE			FLUID	PHYSICAL STATUS		AIR		GAS	
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-	
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g	
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C	
		PROJECT FLOW		-					
		DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		- °C		
		DENSITY @ OPERATING CONDITION				-		kg/m³	
		VISCOSITY @ OPERATING CONDITION				-		Cp	
		FLUID CONDUCTIVITY				-		µS/cm²	
		INCRUSTATION				-		-	
		SUSPENDE SOLIDS (%)				-		-	
		MAXIMUM LOSS OF LOAD ALLOWED				-		-	
		MANUFACTURER		FISHER OR SIMILAR					
		MODEL							