







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
Α	31MAR2021	60% DD ISSUE	MAB	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV









CLIENT NR: PRD-AIC-DSH-042 NUMBER: 569-DB7B-AIC-731-002

TITLE

SHEET: de 20

REV.:

AUTOMATED BALL VALVE

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

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NUMBER: 569-DB7B-AIC-731-002 CLIENT NR:

R: PRD-AIC-DSH-042

SHEET: de 20

AUTOMATED BALL VALVE

REV.:

REFERENCE DOCUMENTS

7B-Z-0-0-01 PRD-AIC-LIS-046

TITLE

PROCESS INDEX DRUG SUBSTANCE BUILDING 7B INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST

GENERAL NOTES

- 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.
- 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.
- 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
- 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.
- 5 Technical documents in general (drawings, technical specifications, data sheets and material requests, lists, manuals, etc.), must be identified.
- 6 Grounding rings must be provided in compatible material, with the instrument box and easy access for assembly, being at least AISI 316.
- 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.

REVISION 0 - NOTES

1- REVISED AS PER INSTRUMENT LIST NUMBER PRD-AIC-LIS010_B_PCS_INSTRUMENT_INDEX AND BACKLOG NUMBER 99000184.0 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.









TITLE

SHEET: de 20

REV.:

2

AUTOMATED BALL VALVE

INSTRUMENT TAG NUMBER 7B-XV-370220 SERVIÇE WATER LOOP 1, RETURN CHILLED P&ID 7B-Z-0-2-34 3 GENERAL LINE SIZE LINE Nº 2" 2"GW0R-370221-SS5-CC VALVE TYPE GLOBE 5 AREA CLASSIFICATION NOT CLASSIFIED ENCLOSURE CLASSIFICATION IP-65 8 CERTIFICATES SEE NOTE 7 - PAGE 3 9 TYPE BODY FULL PORT 10 **BODY SIZE** 2" MATERIAL PIPE, CLASS. SS, SCH.40S, ASTM A312 Gr.TP304L.SEMALESS, ASME B36.19 11 END CONNECTION, AND TYPE. SS, SCH 40S, PL, ASTM A403 WP304L, ASME B16.9 13 BODY MATERIAL STAINLESS STEEL AISI 316L BODY 14 SEAL / SEAL TYPE PTFE 15 FULL FLOW BALL, YES / NO YES 16 BALL & TRIM MATERIAL STAINLESS STEEL AISI 316L PIPING MATERIAL SPECIFICATION SS, SCH 40S, PL, ASTM A403 WP304L, ASME B16.9 BLOWOUT PROOF STEM MANUFACTURER STANDARD 18 19 TYPE HANDLE 20 COLOR 21 LOCKING YES / NO 22 EXTENDED 23 TUPE OF ACTUATOR PNEUMATIC, SINGLE ACTING 24 FAIL POSITION CLOSE 25 CLOSE AT (psig) SPRING 0 bar **4CTUATOR** 26 OPEN AT (psig) 6 bar PNEUMATIC CONECTION 1/4" BSPF 28 BODY COLOR MANUFACTURER STANDARD HOUSING MATERIAL MANUFACTURER STANDARD 29 30 ELETRICAL CLASS ENCLOSURE MANUFACTURER STANDARD 31 SOLENOID VALVE 32 33 ELETRICAL CONNECTION **ACCESSORIES** 34 VOLTAGE 35 INDICATION LIMIT SWITCH OPEN 37 LIMIT SWITCH CLOSED 38 MOUNTING KIT FLUID PHYSICAL STATUS WATER LIQUID MINIMUM FLOW NORMAL MAXIMUM MINIMUM PRESSURE NORMAL MAXIMUM 1.5 bar-q MINIMUM TEMPERATURE NORMAL MAXIMUM 10 PROJECT FLOW SERVICE DESIGN PRESSURE DESIGN TEMPERATURE - bar-g - ℃ DENSITY @ OPERATING CONDITION kg/m³ VISCOSITY @ OPERATING CONDITION Ср FLUID CONDUCTIVITY µS/cm² INCRUSTATION SUSPENDED SOLIDS (%) MAXIMUM LOSS OF LOAD ALLOWED MANUFACTURER FISHER OR SIMILAR MODEL









AUTOMATED BALL VALVE

SHEET: de 20

		MATED BALL VAL	·=						REV.: 2		
	1	INSTRUMENT TAG NUMBE	₽				7B-	-XV-370320	•		
	2	SERVIÇE					WATER LOOP	1, RETURN CHILLE	ED .		
_,	3	P&ID					71	3-Z-0-2-35			
GENERAL	4	LINE SIZE	LINE N°			2	"	2"GW0R-37	0321-SS5-CC		
	5	VALVE TYPE	•					GLOBE			
<u>ق</u>	6	AREA CLASSIFICATION					NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICA	TION					IP-65			
	8	CERTIFICATES					SEE NO	OTE 7 - PAGE 3			
T	9	TYPE BODY					FU	JLL PORT			
	10	BODY SIZE						2"			
	11	MATERIAL PIPE, CLASS.				SS, SCH.40S	s, ASTM A312 G	r.TP304L.SEMALES	S, ASME B36.19		
	12	END CONNECTION, AND	TYPE.			SS, SC	H 40S, PL, AST	M A403 WP304L, AS	SME B16.9		
<u>≻</u> ∱	13	BODY MATERIAL					STAINLES	S STEEL AISI 316L			
BODY	14	SEAL / SEAL TYPE						PTFE			
· H	15	FULL FLOW BALL, YES / N	0			YES					
H		BALL & TRIM MATERIAL				STAINLESS STEEL AISI 316L					
- 1		PIPING MATERIAL SPECIF	FICATION			SS, SC			SME B16.9		
-		BLOWOUT PROOF STEM				SS, SCH 40S, PL, ASTM A403 WP304L, ASME B16.9 MANUFACTURER STANDARD					
	-	TYPE				-					
		COLOR				-					
¥⊦		LOCKING YES / NO				-					
		EXTENDED				-					
\rightarrow		TUPE OF ACTUATOR					PNEUMATI	C, SINGLE ACTING			
-		AIL POSITION						CLOSE			
- 1		CLOSE AT (psig) SPRING				0 bar					
- 1		OPEN AT (psig)				6 bar					
A F		PNEUMATIC CONECTION				/4" BSPF					
₽ŀ		BODY COLOR						TURER STANDARD			
`		HOUSING MATERIAL				MANUFACTURER STANDARD					
- 1		ELETRICAL CLASS						<u> </u>			
-		ENCLOSURE					MANUFACT	TURER STANDARD			
-+	_	SOLENOID VALVE				IVIANOI ACTORER STANDARD					
	-	ELETRICAL CONNECTION	1			-					
ňí L		VOLTAGE						-			
S S S S		INDICATION						-			
iii F		LIMIT SWITCH OPEN						-			
À F		LIMIT SWITCH CLOSED						-			
		MOUNTING KIT						-			
\dashv		FLUID	PHYSICAL STA	ATUS		WA	TER	LIG	QUID		
		MINIMUM FLOW	NORMAL		MAXIMUM	-	-	-	-		
		MINIMUM PRESSURE	NORMAL		MAXIMUM	-	-	1,5	bar-g		
		MINIMUM TEMPERATURE	NORMAL		MAXIMUM	-	-	10	°C		
		PROJECT FLOW	-1					-	1		
/ICE		DESIGN PRESSURE	DESIGN T	EMPERA	ATURE		- bar-g		·		
SERVICE		DENSITY @ OPERATING (CONDITION					- kg/m³	•		
S		VISCOSITY @ OPERATING				- Ng/III - Cp					
Ī		FLUID CONDUCTIVITY				- μS/cm²					
		INCRUSTATION						-			
		SUSPENDED SOLIDS (%)				-		-			
	MAXIMUM LOSS OF LOAD ALLOWED				-		-				
\dashv	MANUFACTURER					FISHER OR SIMILAR					
- 1	MODEL					I IOI EN ON GIIVILAN					









AUTOMATED BALL VALVE

SHEET: 6 de 20

								2		
	1	INSTRUMENT TAG NUMBE	ER .			7B-	XV-371002			
ı	2	SERVIÇE				CIP SYST	EM N°2 RETURN			
	3	P&ID				78	3-Z-0-2-40			
GENERAL	4	LINE SIZE	LINE N°		1	"	1"-SFIC-371	002-SS10-PP		
	5	VALVE TYPE	I				GLOBE			
5	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
ŀ		ENCLOSURE CLASSIFICA	TION				IP-65			
ŀ	8	CERTIFICATES				SEE NO	OTE 7 - PAGE 3			
+		TYPE BODY			+		JLL PORT			
ŀ		BODY SIZE					1"			
ŀ		MATERIAL PIPE, CLASS.			3161.5	SS CLAMP 0.6	μm; MECH. POLISH	FD & F P		
ŀ		END CONNECTION, AND T	TVDE		_		µm; MECH. POLISH			
		BODY MATERIAL	71 L.		37023		S STEEL AISI 316L	LD & L.I .		
200		SEAL / SEAL TYPE				STAINLES	PTFE			
۱ ٔ			0							
ŀ		FULL FLOW BALL, YES / N	0			0741411 50	YES			
-		BALL & TRIM MATERIAL	EICATION .		STAINLESS STEEL AISI 316L STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
-		PIPING MATERIAL SPECIF	TICATION		STAINLE			SEAWLESS		
4		BLOWOUT PROOF STEM			MANUFACTURER STANDARD					
,		TYPE			-					
		COLOR				-				
		LOCKING YES / NO			-					
4		EXTENDED			1	5	-			
ŀ		TUPE OF ACTUATOR				C, SINGLE ACTING				
		FAIL POSITION					CLOSE			
- ⊦		CLOSE AT (psig) SPRING					0 bar			
		OPEN AT (psig)					6 bar			
		PNEUMATIC CONECTION					/4" BSPF			
?		BODY COLOR					URER STANDARD			
ŀ		HOUSING MATERIAL				MANUFAC1	URER STANDARD			
ŀ		ELETRICAL CLASS					-			
4	_	ENCLOSURE			MANUFACTURER STANDARD -					
		SOLENOID VALVE								
		ELETRICAL CONNECTION	'				-			
		VOLTAGE					-			
		INDICATION					-			
		LIMIT SWITCH OPEN					-			
		LIMIT SWITCH CLOSED					-			
_	38	MOUNTING KIT					-			
-		FLUID	PHYSICAL STATUS		Ci	P	G.	AS		
-		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-		
-		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	2	bar-g		
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	80	°C		
,		PROJECT FLOW	•			-		1		
		DESIGN PRESSURE	DESIGN TEMP	ERATURE		- bar-g	-	℃		
		DENSITY @ OPERATING (-	kg/m³			
		VISCOSITY @ OPERATING	CONDITION		- Cp - μS/cm²					
		FLUID CONDUCTIVITY								
		INCRUSTATION								
		SUSPENDED SOLIDS (%)								
		MAXIMUM LOSS OF LOAD	ALLOWED		-		-			
T		MANUFACTURER			FISHER OR SIMILAR					
		MODEL								









NUMBER: TITLE 569-DB7B-AIC-731-002 CLIENT NR:

PRD-AIC-DSH-042

SHEET: 7 de 20 REV.:

								2			
1	1 INSTRUME	NT TAG NUMBE	R			7B-	XV-371102				
2	2 SERVIÇE					CIP SYST	EM N°2 RETURN				
. 3	3 P&ID					7E	3-Z-0-2-40				
ž /	4 LINE SIZE		LINE N°		1"		1"-SFIC-3710	02-SS10-PP			
GENERAL	5 VALVE TY	PE					GLOBE				
5 6	AREA CLA	SSIFICATION				NOT	CLASSIFIED				
	7 ENCLOSU	RE CLASSIFICAT	TION				IP-65				
-	B CERTIFICA	ATES				SEE NO	OTE 7 - PAGE 3				
—	9 TYPE BOD	Y			FULL PORT						
	0 BODY SIZE						1"				
_		PIPE, CLASS.			3161.55	CLAMP 06	μm; MECH. POLISHE	D&FP			
		NECTION, AND T	VPF		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.						
_	3 BODY MAT		// L.		STAINLESS STEEL AISI 316L						
9 ├	4 SEAL / SEA										
·			2		PTFE						
-		N BALL, YES / NO	<i></i>			0741411.50	YES				
-		IM MATERIAL			0711111 50		S STEEL AISI 316L				
		TERIAL SPECIFI	CATION		STAINLES		TM A270 Gr.TP316L, S	SEAMLESS			
	-	PROOF STEM				MANUFAC1	TURER STANDARD				
	9 TYPE					-					
	0 COLOR						-				
	LOCKING				-						
2	2 EXTENDE)			-						
2	3 TUPE OF A	ACTUATOR				PNEUMATI	C, SINGLE ACTING				
2	4 FAIL POSI	TION					CLOSE				
	5 CLOSE AT	(psig) SPRING					0 bar				
2	6 OPEN AT (psig)					6 bar				
2	7 PNEUMAT	IC CONECTION				1.	/4" BSPF				
2 2 2	8 BODY COL	.OR				MANUFACT	URER STANDARD				
`	9 HOUSING	MATERIAL		MANUFACTURER STANDARD							
3	0 ELETRICA	L CLASS					-				
3	1 ENCLOSU	RE				MANUFACT	URER STANDARD				
3	2 SOLENOID	VALVE			-						
, з	3 ELETRICA	L CONNECTION									
3	4 VOLTAGE				-						
3	5 INDICATIO	N					-				
3	6 LIMIT SWI						-				
· -		TCH CLOSED					-				
-	8 MOUNTING										
+	FLUID	- ***	PHYSICAL STATUS		CIP		GA.	S			
\vdash	MINIMUM	FLOW	NORMAL	MAXIMUM	-	-	-	-			
		PRESSURE	NORMAL	MAXIMUM	_	_	2	bar-g			
\vdash			NORMAL	MAXIMUM		_	80	°C			
	PROJECT		TA STANISE	I WAS CHANGINI	-	I -		0			
H			DESIGN TEMPER	DATUDE		lbar a		°C			
	DESIGN P			NATURE	-	bar-g		°C			
		D OPERATING C				-	kg/m³				
		(@ OPERATING	CONDITION			-	Cp				
		NDUCTIVITY			- μS/cm²						
	INCRUSTA										
		ED SOLIDS (%)									
4	_	LOSS OF LOAD	ALLOWED		-		-				
	MANUFAC	TURER			FISHE	R OR SIMILAR					
	MODEL				i						









TITLE

kg/m³

µS/cm²

Ср

FISHER OR SIMILAR

SHEET: 8 de 20 REV.:

2

AUTOMATED BALL VALVE

DENSITY @ OPERATING CONDITION

MAXIMUM LOSS OF LOAD ALLOWED

FLUID CONDUCTIVITY

SUSPENDED SOLIDS (%)

INCRUSTATION

MANUFACTURER

MODEL

VISCOSITY @ OPERATING CONDITION

INSTRUMENT TAG NUMBER 7B-XV-260001 SERVIÇE LIQUID-NITROGEN-DISTRIBUTION P&ID 7B-Z-0-2-74 3 GENERAL LINE SIZE LINE Nº 1/2" 1/2"-LN2-260001-VJP VALVE TYPE GLOBE 5 AREA CLASSIFICATION NOT CLASSIFIED ENCLOSURE CLASSIFICATION IP-65 8 CERTIFICATES SEE NOTE 7 - PAGE 3 9 TYPE BODY FULL PORT 10 **BODY SIZE** 1" MATERIAL PIPE, CLASS. 316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P. 11 END CONNECTION, AND TYPE. 316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P. 13 BODY MATERIAL STAINLESS STEEL AISI 316L BODY 14 SEAL / SEAL TYPE PTFE 15 FULL FLOW BALL, YES / NO YES 16 BALL & TRIM MATERIAL STAINLESS STEEL AISI 316L PIPING MATERIAL SPECIFICATION STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS 18 BLOWOUT PROOF STEM MANUFACTURER STANDARD 19 TYPE HANDLE 20 COLOR 21 LOCKING YES / NO 22 EXTENDED 23 TUPE OF ACTUATOR PNEUMATIC, SINGLE ACTING 24 FAIL POSITION CLOSE 25 CLOSE AT (psig) SPRING 0 bar **4CTUATOR** 26 OPEN AT (psig) 6 bar 27 PNEUMATIC CONECTION 1/4" BSPF 28 BODY COLOR MANUFACTURER STANDARD HOUSING MATERIAL MANUFACTURER STANDARD 29 30 ELETRICAL CLASS ENCLOSURE MANUFACTURER STANDARD 31 SOLENOID VALVE 32 33 ELETRICAL CONNECTION **ACCESSORIES** 34 VOLTAGE 35 INDICATION LIMIT SWITCH OPEN 37 LIMIT SWITCH CLOSED 38 MOUNTING KIT FLUID PHYSICAL STATUS N2 LIQUID MINIMUM FLOW NORMAL MAXIMUM MINIMUM PRESSURE NORMAL MAXIMUM bar-q MINIMUM TEMPERATURE NORMAL MAXIMUM -80 PROJECT FLOW SERVICE DESIGN PRESSURE DESIGN TEMPERATURE - bar-g - ℃









SHEET: 9 de 20

REV.: 2

								2		
	1	INSTRUMENT TAG NUMBE	:R			7B-	-XV-550160			
	2	SERVIÇE				CLEAN COMP	RESSED AIR SUPPLY	/		
١.	3	P&ID				71	3-Z-0-2-11			
RAL	4	LINE SIZE	LINE N°		1/2"-GOP-2400	006-SS10-NI	1/2"-GSP-550	140-SS10-NI		
GENERAL	5	VALVE TYPE				ANGLE	SEAT GLOBE			
15	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICAT	TION				IP-65			
	8	CERTIFICATES				SEE NO	OTE 7 - PAGE 3			
	9	TYPE BODY				ANGLE	SEAT GLOBE			
	10	BODY SIZE					1/2"			
	11	MATERIAL PIPE, CLASS.			316L S	S. CLAMP. 0.6	μm; MECH. POLISHE	D & E.P.		
		END CONNECTION, AND T	YPE.				μm; MECH. POLISHE			
>		BODY MATERIAL					S STEEL AISI 316L			
вору		SEAL / SEAL TYPE				077	PTFE			
"		FULL FLOW BALL, YES / NO	<u> </u>				YES			
		BALL & TRIM MATERIAL				STAINI ES	S STEEL AISI 316L			
		PIPING MATERIAL SPECIFI	ICATION		STAINI ES		TM A270 Gr.TP316L, S	EAMI ESS		
		BLOWOUT PROOF STEM	IOATION		STAINLES	· · · · · · · · · · · · · · · · · · ·	TURER STANDARD	LAMELOO		
_		TYPE			+	WAINOTAG	-			
Ę		COLOR								
HANDLE		LOCKING YES / NO					_			
Ì		EXTENDED								
_		TUPE OF ACTUATOR			+	PNFI IMΔTI	C, SINGLE ACTING			
		FAIL POSITION					CLOSE			
		CLOSE AT (psig) SPRING				0 bar				
Ä		OPEN AT (psig)				6 bar				
ACTUATOR		PNEUMATIC CONECTION					/4" BSPF			
CTU		BODY COLOR					TURER STANDARD			
Ř		HOUSING MATERIAL				MANUFACTURER STANDARD				
		ELETRICAL CLASS					-			
		ENCLOSURE				MANUFAC	TURER STANDARD			
	H-	SOLENOID VALVE			+		-			
 		ELETRICAL CONNECTION					-			
SORIES		VOLTAGE					-			
SOF		INDICATION					-			
ACCES		LIMIT SWITCH OPEN					-			
AC		LIMIT SWITCH CLOSED					-			
		MOUNTING KIT					-			
	Ė	FLUID	PHYSICAL STATUS		AIF	?	GA	S		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-		
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g		
		MINIMUM TEMPERATURE		MAXIMUM	-	-	AMB	€		
		PROJECT FLOW	1			1				
ICE		DESIGN PRESSURE	DESIGN TEMPER	ATURE	1	bar-g	-	°C		
SERVICE		DENSITY @ OPERATING C	CONDITION			1	- kg/m³			
Š		VISCOSITY @ OPERATING			1		- Cp			
		FLUID CONDUCTIVITY					- μS/cm²			
		INCRUSTATION			- μο/cπ ⁻					
		SUSPENDED SOLIDS (%)								
		MAXIMUM LOSS OF LOAD								
		MANUFACTURER	FISHER OR SIMILAR							
		MODEL		1 11 211 2111 2111						
\vdash					-					









NUMBER: TITLE 569-DB7B-AIC-731-002 CLIENT NR:

PRD-AIC-DSH-042

AUTOMATED BALL VALVE

SHEET. 10 de 20

								2		
	1	INSTRUMENT TAG NUMBE	R			7B	XV-550161			
	2	SERVIÇE				CLEAN COMPI	RESSED AIR SUPPL	.Y		
	3	P&ID				7E	3-Z-0-2-11			
CENTERNE	4	LINE SIZE	LINE N°		1/2"-CAP-5501	45-SS10-N	1/2"-GOV-550	0141-SS10-NI		
	5	VALVE TYPE				ANGLE	SEAT GLOBE			
)	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICAT	TION				IP-65			
	8	CERTIFICATES				SEE NO	TE 7 - PAGE 3			
	9	TYPE BODY				ANGLE	SEAT GLOBE			
	10	BODY SIZE					1/2"			
	11	MATERIAL PIPE, CLASS.			316L S	S, CLAMP, 0.6	μm; MECH. POLISHE	ED & E.P.		
	12	END CONNECTION, AND T	YPE.		316L S	S, CLAMP, 0.6	μm; MECH. POLISHE	ED & E.P.		
	13	BODY MATERIAL			STAINLESS STEEL AISI 316L					
200	14	SEAL / SEAL TYPE			PTFE					
	15	FULL FLOW BALL, YES / NO)				YES			
		BALL & TRIM MATERIAL				STAINLES	S STEEL AISI 316L			
	17	PIPING MATERIAL SPECIFI	CATION		STAINLES		M A270 Gr.TP316L,	SEAMLESS		
	18	BLOWOUT PROOF STEM					URER STANDARD			
7	19	TYPE			-					
		COLOR					-			
		LOCKING YES / NO					-			
		EXTENDED					-			
	23	TUPE OF ACTUATOR				PNEUMATIO	C, SINGLE ACTING			
	24	FAIL POSITION				(CLOSE			
ב ב ב	25	CLOSE AT (psig) SPRING					0 bar			
	26	OPEN AT (psig)					6 bar			
	27	PNEUMATIC CONECTION				1/	/4" BSPF			
۲	28	BODY COLOR				MANUFACT	URER STANDARD			
`	29	HOUSING MATERIAL		MANUFACTURER STANDARD						
	30	ELETRICAL CLASS			-					
	31	ENCLOSURE				MANUFACT	URER STANDARD			
	32	SOLENOID VALVE					-			
,	33	ELETRICAL CONNECTION					-			
CAIRS	34	VOLTAGE					-			
ź	35	INDICATION					-			
ACCESS	36	LIMIT SWITCH OPEN					-			
	37	LIMIT SWITCH CLOSED					-			
	38	MOUNTING KIT					-			
		FLUID	PHYSICAL STA	TUS	AIR		G/	48		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-		
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g		
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C		
,		PROJECT FLOW				-				
		DESIGN PRESSURE	DESIGN TE	EMPERATURE	-	bar-g	-	°C		
		DENSITY @ OPERATING C				-	kg/m³			
		VISCOSITY @ OPERATING	CONDITION			-	Ср			
		FLUID CONDUCTIVITY				-	μS/cm²			
		INCRUSTATION								
		SUSPENDED SOLIDS (%)								
		MAXIMUM LOSS OF LOAD	ALLOWED							
		MANUFACTURER				FISHE	R OR SIMILAR			
		MODEL								









SHEET: 11 de 20

REV.: 2

							2
1	INSTRUMENT TAG NUMB	ER			7B-	XV-550162	
2	SERVIÇE				CLEAN COMP	RESSED AIR SUPPL	Υ
3	P&ID				71	3-Z-0-2-11	
<i>4 5</i>	LINE SIZE	LINE N°		1/2"-CAP-550	145-SS10-N	1/2"-GMIX-55	0144-SS10-NI
5	VALVE TYPE	•			ANGLE	SEAT GLOBE	
6	AREA CLASSIFICATION				NOT	CLASSIFIED	
7	ENCLOSURE CLASSIFICA	ATION				IP-65	
8	CERTIFICATES				SEE NO	OTE 7 - PAGE 3	
9	TYPE BODY				ANGLE	SEAT GLOBE	
10	BODY SIZE					1/2"	
-	MATERIAL PIPE, CLASS.			316L S	SS. CLAMP. 0.6	μm; MECH. POLISHE	D & E.P.
	END CONNECTION, AND	TYPF				μm; MECH. POLISHE	
	BODY MATERIAL			07020		S STEEL AISI 316L	
	SEAL / SEAL TYPE				0771171220	PTFE	
	FULL FLOW BALL, YES / N	JO.				YES	
-		vo			STAINII ES	S STEEL AISI 316L	
-	BALL & TRIM MATERIAL PIPING MATERIAL SPECI	FICATION		STAINUE		S	SEAMI ESS
L	BLOWOUT PROOF STEM	ICATION		STAINLES		TURER STANDARD	SLAWILESS
	<u> </u>				WANUFAC	OKEK STANDARD	
	TYPE					-	
-	COLOR					-	
-	LOCKING YES / NO					-	
-	EXTENDED					<u>-</u>	
-	TUPE OF ACTUATOR					C, SINGLE ACTING	
-	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				MANUFACT	TURER STANDARD	
29	HOUSING MATERIAL				MANUFACT	TURER STANDARD	
30	ELETRICAL CLASS					-	
31	ENCLOSURE				MANUFACT	TURER STANDARD	
32	SOLENOID VALVE					-	
33	ELETRICAL CONNECTION	V				-	
34	VOLTAGE					-	
35	INDICATION					-	
36 37	LIMIT SWITCH OPEN					-	
37	LIMIT SWITCH CLOSED					-	
38	MOUNTING KIT					-	
	FLUID	PHYSICAL STAT	rus	All	₹	G/	IS
	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-
	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g
	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C
	PROJECT FLOW		I			-	
	DESIGN PRESSURE	DESIGN TE	MPERATURE		- bar-g	-	°C
	DENSITY @ OPERATING				<u> </u>	- kg/m³	
	VISCOSITY @ OPERATIN					- Cp	
	FLUID CONDUCTIVITY					- μS/cm²	
	INCRUSTATION			_		-	
-	SUSPENDED SOLIDS (%)						
		DALLOWED					
-	IMAXIMUM LOSS OF LOAD	- - FISHER OR SIMILAR					
	MAXIMUM LOSS OF LOAD MANUFACTURER				FISHE	R OR SIMII AR	









AUTOMATED BALL VALVE

SHEET: de 20

								2			
	1	INSTRUMENT TAG NUMBE	R			7B-	XV-550163				
	2	SERVIÇE			C	LEAN COMP	RESSED AIR SUPPL	Y			
١.	3	P&ID				78	3-Z-0-2-11				
GENERAL	4	LINE SIZE	LINE N°		3/4"-CAP-55014	12-SS10-NI	3/4"-CAP-550	142-SS10-NI			
≡NE	5	VALVE TYPE				ANGLE	SEAT GLOBE				
9	6	AREA CLASSIFICATION				NOT	CLASSIFIED				
	7	ENCLOSURE CLASSIFICAT	TION				IP-65				
	8	CERTIFICATES				SEE NO	OTE 7 - PAGE 3				
	9	TYPE BODY				ANGLE	SEAT GLOBE				
	10	BODY SIZE					3/4"				
	11	MATERIAL PIPE, CLASS.			316L SS	, CLAMP, 0.6	μm; MECH. POLISHE	D & E.P.			
	12	END CONNECTION, AND T	YPE.		316L SS	, CLAMP, 0.6	μm; MECH. POLISHE	D & E.P.			
۲	13	BODY MATERIAL				STAINLES	S STEEL AISI 316L				
вору	14	SEAL / SEAL TYPE					PTFE				
	15	FULL FLOW BALL, YES / NO	 D				YES				
	16	BALL & TRIM MATERIAL				STAINLES	S STEEL AISI 316L				
	17	PIPING MATERIAL SPECIFI	ICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS						
	18	BLOWOUT PROOF STEM			MANUFACTURER STANDARD						
	19	TYPE					-				
JΓE	20	COLOR					-				
HANDLE		LOCKING YES / NO					-				
I	22	EXTENDED					-				
	23	TUPE OF ACTUATOR				PNEUMATI	C, SINGLE ACTING				
	24	FAIL POSITION					CLOSE				
	25	CLOSE AT (psig) SPRING				0 bar					
OR	26	OPEN AT (psig)			6 bar						
ACTUATOR	27	PNEUMATIC CONECTION	ATIC CONECTION 1/4" BSPF								
CT	28	BODY COLOR		MANUFACT	URER STANDARD						
٩	29	HOUSING MATERIAL				MANUFACT	URER STANDARD				
	30	ELETRICAL CLASS					-				
	31	ENCLOSURE				MANUFACT	URER STANDARD				
	32	SOLENOID VALVE					-				
S	33	ELETRICAL CONNECTION					-				
RIE	34	VOLTAGE					-				
ACCESSORIES	35	INDICATION					-				
CES		LIMIT SWITCH OPEN					-				
AC	37	LIMIT SWITCH CLOSED					-				
	38	MOUNTING KIT					-				
		FLUID	PHYSICAL STATUS		AIR		GA	S			
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-			
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g			
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C			
		PROJECT FLOW					·				
VICE		DESIGN PRESSURE	DESIGN TEMPER	RATURE	-	bar-g	-	°C			
SERVICE		DENSITY @ OPERATING C	ONDITION				kg/m³				
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		VISCOSITY @ OPERATING	CONDITION				Ср				
		FLUID CONDUCTIVITY				-	μS/cm²				
		INCRUSTATION			-		-				
		SUSPENDED SOLIDS (%)									
		MAXIMUM LOSS OF LOAD	ALLOWED								
		MANUFACTURER			FISHER OR SIMILAR						
		MODEL									









13 de 20

REV.: 2

								2		
	1	INSTRUMENT TAG NUMBEI	₹			7B	XV-550164			
	2	SERVIÇE			C	LEAN COMPI	RESSED AIR SUPPLY	,		
	3	P&ID				7E	3-Z-0-2-11			
RAL	4	LINE SIZE	LINE N°		1/2"-GMIX-5501	58-SS10-NI	1/2"-GMIX-550	144-SS10-NI		
GENERAL	5	VALVE TYPE				ANGLE	SEAT GLOBE			
GE		AREA CLASSIFICATION				NOT	CLASSIFIED			
		ENCLOSURE CLASSIFICAT	ION				IP-65			
		CERTIFICATES				SEE NO	TE 7 - PAGE 3			
	<u> </u>	TYPE BODY					SEAT GLOBE			
		BODY SIZE					1/2"			
		MATERIAL PIPE, CLASS.			316L SS	. CLAMP. 0.6	μm; MECH. POLISHEL	D & E.P.		
		END CONNECTION, AND T	YPE.				μm; MECH. POLISHEI			
>		BODY MATERIAL	·· - ·				S STEEL AISI 316L			
BODY		SEAL / SEAL TYPE					PTFE			
1		FULL FLOW BALL, YES / NO)				YES			
		BALL & TRIM MATERIAL				STAINLES	S STEEL AISI 316L			
		PIPING MATERIAL SPECIFIC	CATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
		BLOWOUT PROOF STEM	<u> </u>		MANUFACTURER STANDARD					
\vdash		TYPE					-			
ΤE		COLOR								
HANDLE		LOCKING YES / NO			-					
Ì		EXTENDED			-					
	-	TUPE OF ACTUATOR			PNEUMATIC, SINGLE ACTING					
		FAIL POSITION				CLOSE				
		CLOSE AT (psig) SPRING				0 bar				
J.R		OPEN AT (psig)				6 bar				
ACTUATOR		PNEUMATIC CONECTION				1,	'4" BSPF			
CTL		BODY COLOR					URER STANDARD			
Ā		HOUSING MATERIAL			MANUFACTURER STANDARD					
		ELETRICAL CLASS			-					
		ENCLOSURE				MANUFACT	URER STANDARD			
		SOLENOID VALVE					_			
,	33	ELETRICAL CONNECTION					-			
SIES		VOLTAGE					-			
ACCESSORIES		INDICATION					-			
CES		LIMIT SWITCH OPEN					-			
AC		LIMIT SWITCH CLOSED					-			
		MOUNTING KIT					-			
П		FLUID	PHYSICAL STATUS		AIR		GAS	S		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-		
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g		
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C		
		PROJECT FLOW				-				
/ICE		DESIGN PRESSURE	DESIGN TEMPER	ATURE	-	bar-g	-	°C		
SERVICE		DENSITY @ OPERATING C	ONDITION			-	kg/m³			
S		VISCOSITY @ OPERATING				-	Ср			
		FLUID CONDUCTIVITY				-	μS/cm²			
		INCRUSTATION								
		SUSPENDED SOLIDS (%)								
		MAXIMUM LOSS OF LOAD A	ALLOWED							
		MANUFACTURER			FISHER OR SIMILAR					
		MODEL								









AUTOMATED BALL VALVE

SHEET: de 20

								2			
	1	INSTRUMENT TAG NUMBE	ER			7B-	XV-550165				
	2	SERVIÇE			1	CLEAN COMP	RESSED AIR SUPPL	Y			
١.	3	P&ID				78	3-Z-0-2-11				
RAL	4	LINE SIZE	LINE N°		1/2"-GMIX-550	159-SS10-NI	1/2"-GOP-550	140-SS10-NI			
GENERAL	5	VALVE TYPE				ANGLE	SEAT GLOBE				
GE	6	AREA CLASSIFICATION				NOT	CLASSIFIED				
	7	ENCLOSURE CLASSIFICA	TION				IP-65				
		CERTIFICATES				SEE NO	OTE 7 - PAGE 3				
	<u> </u>	TYPE BODY			+		SEAT GLOBE				
	_	BODY SIZE				7.1.022	1/2"				
		MATERIAL PIPE, CLASS.			3161.5	S CLAMP 0.6	μm; MECH. POLISHE	:D & F P			
		END CONNECTION, AND T	TVDE				μm; MECH. POLISHE				
		BODY MATERIAL	IFL.		3702.3		<u> </u>	.D & L.F.			
вору						STAINLES	S STEEL AISI 316L				
В		SEAL / SEAL TYPE					PTFE YES				
	-	FULL FLOW BALL, YES / N	0								
	<u> </u>	BALL & TRIM MATERIAL			STAINLESS STEEL AISI 316L						
		PIPING MATERIAL SPECIF	ICATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS						
		BLOWOUT PROOF STEM			MANUFACTURER STANDARD						
Ħ		TYPE			-						
HANDLE		COLOR			-						
HA		LOCKING YES / NO			-						
		EXTENDED					-				
		TUPE OF ACTUATOR	FAIL POSITION				C, SINGLE ACTING				
						CLOSE					
~		CLOSE AT (psig) SPRING					0 bar				
704		OPEN AT (psig)					6 bar				
ACTUATOR	-	PNEUMATIC CONECTION				1.	/4" BSPF				
AC	28	BODY COLOR				MANUFACT	URER STANDARD				
	29	HOUSING MATERIAL				MANUFACT	URER STANDARD				
	30	ELETRICAL CLASS					-				
	31	ENCLOSURE				MANUFACT	URER STANDARD				
		SOLENOID VALVE					-				
S	33	ELETRICAL CONNECTION			-						
SORIES	34	VOLTAGE					-				
SS	35	INDICATION					=				
ACCESS	36	LIMIT SWITCH OPEN					-				
Ă	37	LIMIT SWITCH CLOSED					-				
	38	MOUNTING KIT					-				
		FLUID	PHYSICAL STATUS		AIF	?	GA	S			
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-			
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g			
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C			
ш		PROJECT FLOW									
VIC		DESIGN PRESSURE	DESIGN TEMPE	RATURE	-	bar-g	-	°C			
SERVICE		DENSITY @ OPERATING O	CONDITION			-	kg/m³				
,		VISCOSITY @ OPERATING	CONDITION		- Cp						
		FLUID CONDUCTIVITY				-	μS/cm²				
		INCRUSTATION			- '-						
		SUSPENDED SOLIDS (%)			-		-				
		MAXIMUM LOSS OF LOAD	ALLOWED								
		MANUFACTURER			FISHER OR SIMILAR						
		MODEL									
	_				_						









AUTOMATED BALL VALVE

^{SHEET:} 15 de 20

								2		
	1	INSTRUMENT TAG NUMBE	R			7B-	XV-560160			
	2	SERVIÇE			1	CLEAN COMP	RESSED AIR SUPPL	Y		
١.	3	P&ID				7E	3-Z-0-2-13			
GENERAL	4	LINE SIZE	LINE N°		1/2"-GOP-5601	140-SS10-NI	1/2"-GOP-560	140-SS10-NI		
ENE.	5	VALVE TYPE	I			ANGLE	SEAT GLOBE			
g G	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICA	TION				IP-65			
	8	CERTIFICATES				SEE NO	OTE 7 - PAGE 3			
\vdash	9	TYPE BODY				ANGLE	SEAT GLOBE			
	_	BODY SIZE					1/2"			
		MATERIAL PIPE, CLASS.			3161 S	S CLAMP 0.6	μm; MECH. POLISHE	D & F P		
		END CONNECTION, AND T	YPF				µm; MECH. POLISHE			
_		BODY MATERIAL	77 2.		3702.0		S STEEL AISI 316L	.D Q L.i .		
вору		SEAL / SEAL TYPE			PTFE					
В		FULL FLOW BALL, YES / N	0				YES			
		BALL & TRIM MATERIAL	0			STAINII ES				
	_	PIPING MATERIAL SPECIF	TICATION!		STAINLESS STEEL ASTM A270 Cr TD216L SEAMLESS					
			TCATION		STAINLESS STEEL, ASTM A270 Gr.TP316L, SEAMLESS					
_		BLOWOUT PROOF STEM TYPE			MANUFACTURER STANDARD					
Щ					-					
HANDLE		COLOR			<u>-</u>					
¥		LOCKING YES / NO			- -					
		EXTENDED TUPE OF ACTUATOR				DAICLIAATI	C SINCLE ACTING			
			FAIL POSITION				C, SINGLE ACTING			
						CLOSE				
œ		CLOSE AT (psig) SPRING					0 bar			
470		OPEN AT (psig) PNEUMATIC CONECTION					6 bar			
ACTUATOR							/4" BSPF			
A		BODY COLOR			TURER STANDARD					
		HOUSING MATERIAL ELETRICAL CLASS				MANUFACI	TURER STANDARD			
						MAANUUTACI	- TURER STANDARD			
	<u> </u>	ENCLOSURE SOLENOID VALVE				MANUFACI	URER STANDARD			
		ELETRICAL CONNECTION					-			
IES		VOLTAGE								
SORIES		INDICATION								
ES							<u>-</u>			
ACCESS		LIMIT SWITCH OPEN LIMIT SWITCH CLOSED								
'										
_	136	MOUNTING KIT FLUID	PHYSICAL STATUS		AIF	?	- GA	S		
	\vdash	MINIMUM FLOW	NORMAL	MAXIMUM		<u> </u>	-	-		
		MINIMUM PRESSURE	NORMAL	MAXIMUM		1 -	3	bar-g		
	\vdash	MINIMUM TEMPERATURE		MAXIMUM	-	-	AMB	var-y °C		
	-	PROJECT FLOW	I TOTAL TOTAL	IMPONIVION	<u> </u>	1 -	. AIVID			
CE		DESIGN PRESSURE	DESIGN TEMPE	FRATURE		- bar-g		°C		
SERVICE	-	DENSITY @ OPERATING O		IVATORE	<u> </u>	I ^{Sai-y}	- kg/m³			
SE	\vdash	VISCOSITY @ OPERATING C				-	-			
		FLUID CONDUCTIVITY	J CONDITION		- Cp					
		INCRUSTATION			- μS/cm²					
	\vdash	SUSPENDED SOLIDS (%)			_					
		MAXIMUM LOSS OF LOAD	ALLOWED		_		_			
\vdash	\vdash	MANUFACTURER	ALLOWLD							
	-				FISHER OR SIMILAR					
	<u> </u>	MODEL								









AUTOMATED BALL VALVE

SHEET: 16 de 20

									2	
1	INSTRUMENT TAG NUMBER					7B-XV-560161				
2	2 SERVIÇE					CLEAN COMPRESSED AIR SUPPLY				
. 3	P&ID					7B-Z-0-2-13				
GENERAL	LINE SIZE LINE N°				1/2"-GC	1/2"-GCO2-560141-SS10-NI 3/4"-GOV-560141-SS10-NI				
	VALVE TYPE						ANGLE	SEAT GLOBE		
^ι (δ	AREA CLASSIFICATION						NOT	CLASSIFIED		
7	7 ENCLOSURE	CLASSIFICAT	TION					IP-65		
٤	B CERTIFICAT	ES				SEE NOTE 7 - PAGE 3				
g	TYPE BODY						ANGLE	SEAT GLOBE		
1	0 BODY SIZE							1/2"		
1	1 MATERIAL P	IPE, CLASS.				316L SS	S, CLAMP, 0.6	μm; MECH. POLISHE	D & E.P.	
1:	2 END CONNE	CTION, AND T	YPE.			316L SS	S, CLAMP, 0.6	μm; MECH. POLISHE	D & E.P.	
<u>≻</u> 1.	3 BODY MATE	RIAL					STAINLES	S STEEL AISI 316L		
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	4 SEAL / SEAL	TYPE						PTFE		
·	5 FULL FLOW	BALL, YES / NO	 D					YES		
1	6 BALL & TRIN	MATERIAL					STAINLES	S STEEL AISI 316L		
-		PIPING MATERIAL SPECIFICATION						TM A270 Gr.TP316L, S	EAMLESS	
1	8 BLOWOUT F	ROOF STEM						TURER STANDARD		
1:	9 TYPE							-		
	0 COLOR							-		
1ANDLE 2	1 LOCKING YE	S/NO				-				
	2 EXTENDED							-		
2.	3 TUPE OF AC	TUATOR					PNEUMATI	C, SINGLE ACTING		
2	4 FAIL POSITION	ON						CLOSE		
2	5 CLOSE AT (p	sig) SPRING				0 bar				
2	6 OPEN AT (ps	sig)				6 bar				
20 10A 10R 20 20 20 20 20 20 20 20 20 20 20 20 20	7 PNEUMATIC	CONECTION				1/4" BSPF				
2	8 BODY COLO	R				MANUFACTURER STANDARD				
` —	9 HOUSING M	ATERIAL				MANUFACTURER STANDARD				
3	0 ELETRICAL	CLASS				-				
3	1 ENCLOSURE						MANUFACT	TURER STANDARD		
3.	2 SOLENOID V	SOLENOID VALVE				-				
₂₀ 3.	3 ELETRICAL	CONNECTION				-				
3. 3.	4 VOLTAGE					-				
λ 2 3	5 INDICATION					·				
ACCESS 30	6 LIMIT SWITC	LIMIT SWITCH OPEN LIMIT SWITCH CLOSED						-		
₹ 3	7 LIMIT SWITC							-		
3	8 MOUNTING	KIT						-		
	FLUID		PHYSICAL STATU	JS		AIR		GA	S	
	MINIMUM FL	OW	NORMAL	MAXIMUM	-		-	-	-	
	MINIMUM PF	RESSURE	NORMAL	MAXIMUM	-		-	3	bar-g	
	MINIMUM TE	MPERATURE	NORMAL	MAXIMUM			-	AMB	°C	
╻┕		PROJECT FLOW DESIGN PRESSURE DESIGN TEMPERATURE								
SERVICE						-	bar-g		℃	
SEA F		DENSITY @ OPERATING CONDITION					-	- kg/m³		
		VISCOSITY @ OPERATING CONDITION					- Cp			
	FLUID CONE						-	μS/cm²		
	INCRUSTAT									
		SOLIDS (%)								
_		MAXIMUM LOSS OF LOAD ALLOWED								
	MANUFACTU	JRER					FISHE	R OR SIMILAR		
	MODEL	MODEL								









AUTOMATED BALL VALVE

SHEET: de 20

								2		
	1	INSTRUMENT TAG NUMBE	ER		7B-XV-560162					
ı	2	SERVIÇE			CLEAN COMPRESSED AIR SUPPLY					
GENERAL	3	P&ID	7B-Z-0-2-13							
	4	LINE SIZE	LINE N°		1/2"-CAP-560	0180-SS10-NI	3/4"-GMIX-56	0178-SS10-NI		
	5	VALVE TYPE	I			ANGLE	SEAT GLOBE			
5	6	AREA CLASSIFICATION			NOT CLASSIFIED					
ŀ		ENCLOSURE CLASSIFICA	TION		IP-65					
ŀ	8	CERTIFICATES				SEE NO	OTE 7 - PAGE 3			
+	_	TYPE BODY					SEAT GLOBE			
ŀ		BODY SIZE				7,1,1022	1/2"			
ŀ		MATERIAL PIPE, CLASS.			316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
ŀ		END CONNECTION, AND	TVDE		316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P. 316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
		BODY MATERIAL	, , , , , , , , , , , , , , , , , , ,		3702		S STEEL AISI 316L	LD & L.I .		
		SEAL / SEAL TYPE				STAINLES	PTFE			
۱ ۵			10							
ŀ		FULL FLOW BALL, YES / N				0741411 50	YES			
-		BALL & TRIM MATERIAL PIPING MATERIAL SPECIF	EICATION!		OTAM!! 5		S STEEL AISI 316L	SEANN FOO		
			TOATION		STAINLE	· · · · · · · · · · · · · · · · · · ·	M A270 Gr.TP316L,	SEAWLESS		
4		BLOWOUT PROOF STEM				WANUFACT	URER STANDARD			
1		TYPE					-			
אואר		COLOR LOCKING YES / NO					-			
5				-						
\dashv		EXTENDED				DAIE! MAAT!	-	HED & E.P. SEAMLESS		
-		TUPE OF ACTUATOR					C, SINGLE ACTING			
ŀ		FAIL POSITION			CLOSE					
.		CLOSE AT (psig) SPRING			0 bar					
		OPEN AT (psig)				6 bar				
ייטועטוסו		PNEUMATIC CONECTION				1/4" BSPF				
3		BODY COLOR				MANUFACTURER STANDARD				
		HOUSING MATERIAL				MANUFACTURER STANDARD				
		ELETRICAL CLASS		MANUSACTURER STANDARD						
	_	ENCLOSURE				MANUFACT	URER STANDARD			
		SOLENOID VALVE			-					
3	33	ELETRICAL CONNECTION			-					
SHIPS	34	VOLTAGE		-						
2		INDICATION				-				
ACCESS		LIMIT SWITCH OPEN				-				
۱							-			
\sqcup	38	MOUNTING KIT					-			
-		FLUID	PHYSICAL STATU		A	R	G/	AS		
-		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-		
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3			
-		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	℃		
,		PROJECT FLOW	DESIGN TEM			-				
3		DESIGN PRESSURE		- bar-g - °C		℃				
SEN VICE		DENSITY @ OPERATING	- kg/m³							
		VISCOSITY @ OPERATING	GCONDITION		- Ср					
		FLUID CONDUCTIVITY				- μS/cm²				
		INCRUSTATION			-		-			
		SUSPENDED SOLIDS (%)			-	•	-			
		MAXIMUM LOSS OF LOAD	ALLOWED		-					
T		MANUFACTURER				FISHE	R OR SIMILAR			
_[MODEL								
_										









AUTOMATED BALL VALVE

18 de 20

								2		
	1	INSTRUMENT TAG NUMBE	ER .		7B-XV-560163					
	2 SERVIÇE				CLEAN COMPRESSED AIR SUPPLY					
. 🗆	3	P&ID	7B-Z-0-2-13							
GENERAL	4	LINE SIZE	1"-CAP-560142-SS10-NI 1"-CAP-560142-SS10-NI							
	5	VALVE TYPE		ANGLE SEAT GLOBE						
5	6	AREA CLASSIFICATION				NOT CLASSIFIED				
F	7	ENCLOSURE CLASSIFICAT	ICLOSURE CLASSIFICATION				IP-65			
F	8	CERTIFICATES				SEE NOTE 7 - PAGE 3				
$^{+}$	9	TYPE BODY				ANGLE SEAT GLOBE				
	10	BODY SIZE				1"				
	11	MATERIAL PIPE, CLASS.			316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.					
\vdash		END CONNECTION, AND T	YPE.			•	ım; MECH. POLISHI			
\vdash		BODY MATERIAL				•	STEEL AISI 316L			
! ⊢		SEAL / SEAL TYPE					PTFE			
-		FULL FLOW BALL, YES / N	0				YES			
\vdash		BALL & TRIM MATERIAL				STAINLESS	S STEEL AISI 316L			
\perp		PIPING MATERIAL SPECIF	ICATION		STAINLES		M A270 Gr.TP316L,	SEAMLESS		
\perp		BLOWOUT PROOF STEM				· · · · · · · · · · · · · · · · · · ·	URER STANDARD			
	-	TYPE			1		-			
		COLOR			1		-			
		LOCKING YES / NO			1		-			
		EXTENDED			1		-			
1	23	TUPE OF ACTUATOR				PNEUMATIC	, SINGLE ACTING			
	24	FAIL POSITION				C	CLOSE			
	25	CLOSE AT (psig) SPRING			0 bar					
		OPEN AT (psig)			6 bar					
		PNEUMATIC CONECTION				1/4" BSPF				
	28	BODY COLOR				MANUFACTURER STANDARD				
` -	29	HOUSING MATERIAL				MANUFACTURER STANDARD				
T,	30	ELETRICAL CLASS			-					
	31	ENCLOSURE		MANUFACTURER STANDARD						
1	32	SOLENOID VALVE				-				
	33	ELETRICAL CONNECTION			-					
1 I–		VOLTAGE			1	-				
3		INDICATION				-				
¦ ⊢		LIMIT SWITCH OPEN LIMIT SWITCH CLOSED			-					
? ;	37						-			
	38	MOUNTING KIT					-			
\top		FLUID	PHYSICAL STATUS		AIF	?	G	AS		
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-		
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g		
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	AMB	°C		
		PROJECT FLOW								
		DESIGN PRESSURE		- bar-g	-	°C				
		DENSITY @ OPERATING C		-	kg/m³					
<u> </u>		VISCOSITY @ OPERATING	CONDITION		- Cp - μS/cm²					
		FLUID CONDUCTIVITY								
		INCRUSTATION			-					
		SUSPENDED SOLIDS (%)			-		-			
		MAXIMUM LOSS OF LOAD	ALLOWED							
T	П	MANUFACTURER				FISHER	OR SIMILAR			
		MODEL								









AUTOMATED BALL VALVE

19 de 20

								2		
	1	INSTRUMENT TAG NUMBE	7B-XV-560164							
	2	SERVIÇE			CLEAN COMPRESSED AIR SUPPLY					
	3	P&ID	7B-Z-0-2-13							
GENERAL	4	LINE SIZE	1"-CAP-5601	1"-CAP-560142-SS10-NI 3/4"-GMIX-560178-SS10-NI						
¥	5	VALVE TYPE		ANGLE SEAT GLOBE						
5	6	AREA CLASSIFICATION				NOT CLASSIFIED				
ŀ	7	ENCLOSURE CLASSIFICAT	TION				IP-65			
ŀ	8	CERTIFICATES				SEE NOTE 7 - PAGE 3				
┪	9	TYPE BODY			ANGLE SEAT GLOBE					
ŀ	10	BODY SIZE				ANGLE SEAT GLOBE				
ŀ	11	MATERIAL PIPE, CLASS.			316L S	S. CLAMP. 0.6 µ	ım; MECH. POLISHI	ED & E.P.		
ł		END CONNECTION, AND T	YPE.			•	ım; MECH. POLISHI			
ا ۱		BODY MATERIAL				•	STEEL AISI 316L			
800 Y		SEAL / SEAL TYPE					PTFE			
`		FULL FLOW BALL, YES / NO	0				YES			
ŀ		BALL & TRIM MATERIAL				STAINI ESS	STEEL AISI 316L			
ŀ		PIPING MATERIAL SPECIFI	ICATION		STAINI FS		M A270 Gr.TP316L,	SEAMLESS		
ŀ		BLOWOUT PROOF STEM			377	· · · · · · · · · · · · · · · · · · ·	JRER STANDARD			
\dashv		TYPE					-			
		COLOR								
ול ה		LOCKING YES / NO								
1		EXTENDED				-				
┥		TUPE OF ACTUATOR				PNFLIMATIC	, SINGLE ACTING	60178-SS10-NI IED & E.P. IED & E.P.		
ŀ		FAIL POSITION					LOSE			
-		CLOSE AT (psig) SPRING			0 bar					
<u> ا</u>		OPEN AT (psig)			6 bar					
		PNEUMATIC CONECTION			1/4" BSPF					
4010A10R		BODY COLOR			MANUFACTURER STANDARD					
Ĭ		HOUSING MATERIAL			MANUFACTURER STANDARD					
ŀ	-	ELETRICAL CLASS			MANOTACTORER STANDARD					
ŀ		ENCLOSURE			MANUFACTURER STANDARD					
+		SOLENOID VALVE				MANOTACTO	-			
ŀ		ELETRICAL CONNECTION								
מוצט		VOLTAGE								
5						-				
ACCESS		INDICATION								
<u>ا</u> کِ		I LIMIT SWITCH OPEN I LIMIT SWITCH CLOSED MOUNTING KIT								
\dashv	50	FLUID	PHYSICAL STATUS		AIF	₂		<u> </u>		
-		MINIMUM FLOW	NORMAL	MAXIMUM		` <u> </u>	-	T -		
- }		MINIMUM PRESSURE	NORMAL	MAXIMUM		_	3	har-o		
ŀ				MAXIMUM			AMB			
-		PROJECT FLOW	1	2 (1110)			,			
3		DESIGN PRESSURE		- bar-g	_	ŀc				
SENVICE		DENSITY @ OPERATING C			kg/m³	1				
SE		VISCOSITY @ OPERATING C					Ср			
-		FLUID CONDUCTIVITY			- Cp - μS/cm²					
-		INCRUSTATION								
-		SUSPENDED SOLIDS (%)					_			
-		MAXIMUM LOSS OF LOAD	ALLOWED							
Į		I CAD	- - FISHER OR SIMILAR							
\dashv		MANUFACTURER				FISHED	OR SIMILAR			









NUMBER: TITLE 569-DB7B-AIC-731-002 PRD-AIC-DSH-042 CLIENT NR:

AUTOMATED BALL VALVE

SHEET: 20 de 20

							2			
1	INSTRUMENT TAG NUMBE	INSTRUMENT TAG NUMBER				7B-XV-560165				
2	SERVIÇE				CLEAN COMP	RESSED AIR SUPPL	.Y			
	P&ID		7B-Z-0-2-13							
5	LINE SIZE	3/4"-GMIX-5601	3/4"-GMIX-560179-SS10-NI 3/4"-GSP-560140-SS10-NI							
5	VALVE TYPE		ANGLE	SEAT GLOBE						
ϵ	AREA CLASSIFICATION			NOT CLASSIFIED						
-	ENCLOSURE CLASSIFICA	TION			IP-65					
۱ ا	CERTIFICATES				SEE NOTE 7 - PAGE 3					
-	TYPE BODY				ANGLE SEAT GLOBE					
_	0 BODY SIZE			3/4"						
	1 MATERIAL PIPE, CLASS.			316L SS, CLAMP, 0.6 µm; MECH. POLISHED & E.P.						
-	2 END CONNECTION, AND	TYPE				µm; MECH. POLISH				
_	3 BODY MATERIAL			0.02.00		S STEEL AISI 316L				
	4 SEAL/SEAL TYPE				O., WINELO	PTFE				
	5 FULL FLOW BALL, YES / N	0				YES				
	6 BALL & TRIM MATERIAL				STAINI ES	S STEEL AISI 316L				
\vdash	7 PIPING MATERIAL SPECIF	FICATION		STAINII ES		TM A270 Gr.TP316L,	SEAMI ESS			
F.	8 BLOWOUT PROOF STEM	IOATION		STAINLES		TURER STANDARD	OLAWILLOO			
+	9 TYPE			+	WAINOI AC	-				
-	O COLOR									
_	1 LOCKING YES / NO									
\vdash	2 EXTENDED				-					
+-	3 TUPE OF ACTUATOR				PNELIMATI	C, SINGLE ACTING				
	4 FAIL POSITION					CLOSE	3			
_	5 CLOSE AT (psig) SPRING			0 bar						
	6 OPEN AT (psig)			6 bar						
2	7 PNEUMATIC CONECTION				1/4" BSPF					
-	8 BODY COLOR				MANUFACTURER STANDARD					
	9 HOUSING MATERIAL									
	0 ELETRICAL CLASS				MANUFACTURER STANDARD -					
-	1 ENCLOSURE				MANUEAC	- TURER STANDARD				
-	2 SOLENOID VALVE			+	IVIAINUFAC	-				
		1								
\vdash		ELETRICAL CONNECTION				_				
3		VOLTAGE				-				
3		INDICATION			-					
-		LIMIT SWITCH OPEN								
Ľ	7 LIMIT SWITCH CLOSED					-				
13	8 MOUNTING KIT FLUID	PHYSICAL STATU	10	AIR		- T 6	AS			
\vdash	MINIMUM FLOW					- G.	AS _			
\vdash		NORMAL	MAXIMUM	-	-					
	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	3	bar-g °C			
-	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	_	AMB	1			
	PROJECT FLOW				 	- 	00			
		DESIGN PRESSURE DESIGN TEMPERATURE			- bar-g - °C					
L	DENSITY @ OPERATING	- kg/m³								
-	VISCOSITY @ OPERATING		- Cp							
_	FLUID CONDUCTIVITY					- μS/cm²				
-	INCRUSTATION			-		 				
1	SUSPENDED SOLIDS (%)	444 014/50				-				
\bot	MAXIMUM LOSS OF LOAD	ALLOWED		-		-				
\vdash	MANUFACTURER				FISHE	R OR SIMILAR				
\bot	MODEL									