







DOC NUMBER:

569-DB7B-AIC-733-001

CLIENT NUMBER:

PRD-AIC-DSH-075

CLIENT:

TAKEDA/BAXALTA

PROJECT:

BURITI EPCVM PROJECT

DRUG SUBSTANCE - BMS - DATA SHEET MOTORIZED CONTROL VALVE

1	27JAN2022	ISSUE FOR CONSTRUCTION CONSIDERING COMMENTS	MAV	MAF	RSP
0	27AUG2021	ISSUE FOR CONSTRUCTION	JHA	MAF	RSP
Α	24MAR2021	60% DD ISSUE	JHA	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV









NUMBER: 569-DB7B-AIC-733-001 CLIENT NR: PRD-AIC-DSH-075

TITLE

SHEET:

2 de 7

MOTORIZED CONTROL VALVE

74

DOCUMENT REVIEW CONTROL																				
Revision	Α	0	1	2	3	4	Revision	Α	0	1	2	3	4	Revision	Α	0	1	2	3	4
Page							Page							Page						
1	Х	Χ	Χ				26							51						
2	Х	Χ	Χ				27							52						
3	Х	Χ	Χ				28							53						
4	Х	Χ	Χ				29							54						
5	Х	Χ	Χ				30							55						
6	Х	Χ	Χ				31							56						
7	Х	Χ	Χ				32							57						
8	Χ	Χ	/				33							58						
9	Х	Χ					34							59						
10	Χ	Χ					35							60						
11	Χ	Χ					36							61						
12	Х	Χ					37							62						
13	Х	Χ					38							63						
14	Х	Χ					39							64						
15	/	Χ					40							65						
16	/	Χ					41							66						
17	/	Χ					42							67						
18	/	Χ					43							68	$oldsymbol{ol}}}}}}}}}}}}}}}}}$					
19	/	/					44							69						
20							45							70						
21							46						Ш	71						
22							47							72						
23							48							73						

REVISION 0 NOTES:

49

50

- 1- UPDATE ACCORDING TO P&ID (HVAC AND PROCESS).
- 2- INSERTION OF PROCESS DATA.

24

25

3- INSERTION OF INSTRUMENT REFERENCE MODELS.

REVISION 1 NOTES:

1- CANCELLED PV-960059, XV-960001, XV-960002, XV-960003, XV-960004, XV-960005, XV-960006, XV-960056, XV-960057, XV-960080, XV-960083.

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-733-001 CLIENT NR: PRD-AIC-DSH-075

TITLE SHEET:

MOTORIZED CONTROL VALVE

3 de 7

REV.:

REFERENCE DOCUMENTS

7B-M-0-5-44 PRD-AIC-LIS-015 PRD-PIP-TSP-501 PRD-AIC-LIS-046 P&I DIAGRAM - DRUG SUBSTANCE - CHILLED GLYCOL GENERATION SYSTEM DRUG SUBSTANCE - BMS - INSTRUMENT INDEX
PIPE CLASS AND SPECIFICATION - TECHNICAL SPECIFICATION
INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST

GENERAL NOTES

- 1- The identification plates must be supplied in AISI 304 stainless steel, permanently attached to the valve body, with engraving of the respective "TAGs", model, body material, manufacturer, diameter, type, pressure class, Cv and serial number. The serial number of the instrument, when possible, can be recorded on the body itself.
- 2- For all valves must be presented type and degree of protection certificates, both proofs must be explained in the same certificate. Certificates must be issued by INMETRO or accredited body.
- 3- The shutter guides must be made of material of greater hardness than those of the shutters.
- 4- The maximum permissible noise level is 82 dM to 1 m from the valve and must comply with ISA 75.17 and IEC 60534-8-4.
- 5- The manufacturer must send the valve calculation memory.
- 6- The maximum and minimum flow rates to be controlled should be limited to 20% and 85%, respectively, of the available stroke of the control valve.









IUMBER: 569-DB7B-AIC-733-001 CLIENT NR: PRD-AIC-DSH-075

TITLE

SHEET

4 de 7

MOTORIZED CONTROL VALVE

								1			
	1	INSTRUMENT TAG NUMBER				XV	′-980001				
	2	SERVICE			GLYCOL DO PCH-7B-1 FOR BT-7B-1						
	3	P&ID			7B-M-0-5-44						
ΑĽ	4	PIPE LINE	EQUIPMENT NUN	MBER .	10"-GW0S-980001-CS1-CC -						
3ENERAL	5	EQUIPMENT MATERIAL / PIPE	•			CARBON STE	EL ASTM-A106 Gr.	В			
SEV	6	AREA CLASSIFICATION				NOT	CLASSIFIED				
	7	ENCLOSURE CLASSIFICATION				IP 65 (MÍN.) CO	ONF. NBR IEC 6052	29			
	8	CERTIFICATES				(SEE GEN	ERAL NOTES 2)				
	9										
	10	BODY TYPE				BU	TTERFLY				
BODY AND INTERNAL	11	BODY/CAP MATERIAL				ASTM A	-216 Gr. WCB				
	12	WEDGE, DISC OR GATE MATER	RIAL + COATING			ASTM A	-216 Gr. WCB				
2	13	SEAT / RINGS MATERIAL + COA	TING				EPDM				
N	14	SHAFT MATERIAL				ASTM A	-216 Gr. WCB				
Š	15	GASKET MATERIAL					PTFE				
Ϋ́	16	CONNECTION TO THE PROCES	S			WAFE	R - 10", 150#				
Š	17	FLANGE FACE FINISH				NOT	REQUIRED				
٦	18	SEAL CLASS			1		IV				
	19										
	20	TYPE OF ACTUATOR				SMART / ELE	TRIC MOTORIZED	1			
	21	OPENING /CLOSING			DIRECT ACTION						
	22	FAILURE ACTION			STATIONARY						
	23	POWER SUPPLY			3Ø - 380Vac / 60Hz						
5	24	HANDWHEEL			YES						
5	25	ELECTRICAL CONNECTION	QUA	NTITY	1/2" NPT(F) BY MANUFACTURER						
10,100	26	SELF DIAGNOSIS	•		YES						
`	27	CONFIGURATION			LOCAL AND REMOTE						
	28	OPENING, CLOSING AND LOCA	L STOP		LOCAL AND REMOTE						
	29										
	30										
	31	TYPE INDICATION				OPEN	I/CLOSED				
	32	SENSOR TYPE			//\	IDUCTIVE, WIT	H LOCAL INDICAT	ION			
ביווייס	33	CONTACT TYPE			REED SWITCH						
144	34	QUANTITY	TYPE		2 SPDT						
,	35	CAPACITY CONTACT			2A @ 250 Vca						
	36	ELECTRICAL CONNECTION				1/2	" NPT(F)				
Ċ.	37	IDENTIFICATION PLATE				YES (SEE GE	NERAL NOTES 1)				
ACESSON.	38	CONFIGURATION MANUAL (HAI	NDHELD)				YES				
2	39										
	40	FLUID	PHYSICAL STATE		CHILLED \	WATER	LIC	QUID			
	41	MINIMUM FLOW	NORMAL	MAXIMUM	287	287	287	m³/h			
OF ENATING CONDITIONS	42	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	4	4	4	℃			
	43	MINIMUM UPSTREAM PRESSURE	NORMAL	MAXIMUM	0.55	0.55	0.55	bar-g			
	44	MINIMUM DOWNSTREAM PRESSURE	NORMAL	MAXIMUM	0.45	0.45	0.46	bar-g			
	45	DESIGN PRESSURE	DESIGN TEMPER	ATURE	2.7	bar-g	34	1 ℃			
	46	VISCOSITY @ OPERATING CON	IDITION			1.57	Ср				
{	47	DENSITY @ OPERATING COND	ITION			1000.1	kg/m³				
		SUSPENDED SOLIDS (%)					NO				
		SPECIAL FLUID CONDITIONS					NO				
		M.M. / Z / Cp/Cv					//				
		MANUFACTURER					PRK / AUMA				
	52	MODEL				IQ (I	ROTORK)				

NOTES: 1- THE SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER.

²⁻ THE INSTRUMENT SHALL BE PREPARED TO OPERATE WITH PROPYLENE GLICOL 10% IF REQUIRED.









CLIENT NR: PRD-AIC-DSH-075 NUMBER: 569-DB7B-AIC-733-001 TITLE SHEET:

MOTORIZED CONTROL VALVE

5 de 7 REV.:

	. •	MIZED CONTINUE VAL	. • _					1			
	1	INSTRUMENT TAG NUMBER				XI	/-980002				
	2	SERVICE			GLYCOL DO PCH-7B-2 FOR BT-7B-1						
	3	P&ID			7B-M-0-5-44						
₽ F	4	PIPE LINE	EQUIPMENT NUM	IBER	10"-GW0S-980	10"-GW0S-980002-CS1-CC -					
ER	5	EQUIPMENT MATERIAL / PIPE				CARBON STE	EL ASTM-A106 Gr.I	В			
GENERAL	6	AREA CLASSIFICATION				NOT	CLASSIFIED				
· F	7	ENCLOSURE CLASSIFICATION				IP 65 (MÍN.) C	ONF. NBR IEC 6052	29			
┢	8	CERTIFICATES				(SEE GEN	ERAL NOTES 2)				
-	9				+	•					
-	_	BODY TYPE			+	BU	TTERFLY				
-	_	BODY / CAP MATERIAL			1	ASTM A	-216 Gr. WCB				
	_	WEDGE, DISC OR GATE MATER	RIAL + COATING				-216 Gr. WCB				
<u> </u>	_	SEAT / RINGS MATERIAL + COA					EPDM				
₽ŀ	_	SHAFT MATERIAL					-216 Gr. WCB				
<u> </u>		GASKET MATERIAL				7.077	PTFE				
₹ ⊢	_	CONNECTION TO THE PROCES	S			WAFF	R - 10", 150#				
á F	_	FLANGE FACE FINISH					REQUIRED				
· -	_	SEAL CLASS					IV				
⊢	19				+						
	_	TYPE OF ACTUATOR			+	SMART / FLE	TRIC MOTORIZED	<u> </u>			
- 1-	_	OPENING /CLOSING			+						
- 1-		FAILURE ACTION			DIRECT ACTION STATIONARY						
-	_	POWER SUPPLY			+	3Ø - 380Vac / 60Hz					
	-	HANDWHEEL			30 - 300VaC / 60FIZ YES						
475	_	ELECTRICAL CONNECTION	OUA	NTITY	1/2" NI	1/2" NPT(F) BY MANUFACTURER					
∠ ⊢	_	SELF DIAGNOSIS	QUAI	NIII I	YES						
` _	-	CONFIGURATION			LOCAL AND REMOTE						
⊢		OPENING, CLOSING AND LOCA	LSTOR		LOCAL AND REMOTE LOCAL AND REMOTE						
-	_	OPENING, CLOSING AND LOCA	LSTOP		LOCAL AND REMOTE						
- 1	29				_						
_	30	TYPE INDICATION				OBE	I / CLOSED				
-		SENSOR TYPE			OPEN / CLOSED INDUCTIVE, WITH LOCAL INDICATION						
	_										
Ŀ ⊢	_	CONTACT TYPE	TVDE		REED SWITCH						
	_	QUANTITY	TYPE		2 SPDT						
- ⊢		CAPACITY CONTACT ELECTRICAL CONNECTION			2A @ 250 Vca 1/2" NPT(F)						
-	-						ENERAL NOTES 1)				
<u>გ</u> ⊢	-	IDENTIFICATION PLATE CONFIGURATION MANUAL (HAI	ערער אין		_	YES (SEE GI					
SES L	-	CONFIGURATION MANUAL (HAI	NDRELD)		_		YES				
_	39	FLUID	DUVELCAL STATE	-	CUILLED	WATER	1.10	QUID			
_ -	_		PHYSICAL STATE		CHILLED	1		1			
	_	MINIMUM FLOW	NORMAL	MAXIMUM	287	287	287	m³/h			
g L		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	4	4	4	°C			
ם ⊢	-		NORMAL	MAXIMUM	0.55	0.55	0.55	bar-g			
ξĽ			NORMAL	MAXIMUM	0.45	0.45	0.46	bar-g			
ğ Ľ		DESIGN PRESSURE	DESIGN TEMPER	AIUKE	2.7 bar-g 34 °C						
Ž Ľ	_	VISCOSITY @ OPERATING CON			1	1.57					
ž Ļ	_	DENSITY @ OPERATING COND	ITION		1	1000.1					
_		SUSPENDED SOLIDS (%)			1		NO				
-		SPECIAL FLUID CONDITIONS					NO				
-	_	M.M. /Z/Cp/Cv			 	//					
-	_	MANUFACTURER			1		DRK/AUMA				
	52	MODEL				IQ (ROTORK)				

NOTES:

- THE SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER. 1-
- THE INSTRUMENT SHALL BE PREPARED TO OPERATE WITH PROPYLENE GLICOL 10% IF REQUIRED. 2-



MOTORIZED CONTROL VALVE

MODEL

52







PRD-AIC-DSH-075 NUMBER: 569-DB7B-AIC-733-001 CLIENT NR: SHFFT:

TITLE

6 de 7 RFV:

INSTRUMENT TAG NUMBER XV-980014 SERVICE COOLING WATER - COOLING TOWERS PCH-7B-1 2 P&ID 7B-M-0-5-44 3 PIPF I INF **EQUIPMENT NUMBER** 8"-TWR-980014-CS1-NI 4 GENERAL EQUIPMENT MATERIAL / PIPE 5 CARBON STEEL ASTM-A106 Gr.B AREA CLASSIFICATION 6 NOT CLASSIFIED ENCLOSURE CLASSIFICATION IP 65 (MÍN.) CONF. NBR IEC 60529 CERTIFICATES (SEE GENERAL NOTES 2) 8 **BODY TYPE** BUTTERFLY 10 BODY / CAP MATERIAL ASTM A-216 Gr. WCB 11 WEDGE, DISC OR GATE MATERIAL + COATING ASTM A-216 Gr. WCB **BODY AND INTERNAL** SEAT / RINGS MATERIAL + COATING 13 **FPDM** SHAFT MATERIAL ASTM A-216 Gr. WCB 14 15 GASKET MATERIAL PTFF CONNECTION TO THE PROCESS 16 WAFER - 8", 150# FLANGE FACE FINISH NOT REQUIRED 17 SEAL CLASS IV 18 19 TYPE OF ACTUATOR SMART / ELETRIC MOTORIZED 21 OPENING /CLOSING DIRECT ACTION FAILURE ACTION STATIONARY 22 23 POWER SUPPLY 3Ø - 380Vac / 60Hz **ICTUATOR** 24 HANDWHEEL YES ELECTRICAL CONNECTION QUANTITY 1/2" NPT(F) BY MANUFACTURER 25 26 SELF DIAGNOSIS YES CONFIGURATION LOCAL AND REMOTE 27 OPENING. CLOSING AND LOCAL STOP LOCAL AND REMOTE 28 29 30 TYPE INDICATION OPEN / CLOSED 31 32 SENSOR TYPE INDUCTIVE, WITH LOCAL INDICATION SWITCH CONTACT TYPE REED SWITCH 33 34 **QUANTITY** TYPE 2 SPDT CAPACITY CONTACT 2A @ 250 Vca 35 ELECTRICAL CONNECTION 1/2" NPT(F) 36 YES (SEE GENERAL NOTES 1) 37 IDENTIFICATION PLATE CONFIGURATION MANUAL (HANDHELD) YES 38 30 FLUID PHYSICAL STATE CHILLED WATER LIQUID 40 MINIMUM FLOW NORMAL MAXIMUM 202.6 202.6 202.6 m³/h 41 OPERATING CONDITIONS NORMAL MAXIMUM °C MINIMUM TEMPERATURE 37 37 42 37 MINIMUM UPSTREAM PRESSURE NORMAL MAXIMUM 0.97 0.97 0.99 43 bar-g 44 MINIMUM DOWNSTREAM PRESSURE NORMAL MAXIMUM 0 77 0.77 0.79 bar-g DESIGN TEMPERATURE 45 DESIGN PRESSURE 4.6 bar-g 37 ℃ 46 VISCOSITY @ OPERATING CONDITION 0.69 Cp 995.3 kg/m³ DENSITY @ OPERATING CONDITION 47 48 SUSPENDED SOLIDS (%) NO 49 SPECIAL FLUID CONDITIONS NO M.M. /Z/Cp/Cv 50 .../.../... MANUFACTURER ROTORK/AUMA

THE SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER. NOTES 1-

THE INSTRUMENT SHALL BE PREPARED TO OPERATE WITH PROPYLENE GLICOL 10% IF REQUIRED. 2-

IQ (ROTORK)









CLIENT NR: PRD-AIC-DSH-075 NUMBER: 569-DB7B-AIC-733-001 TITLE SHEET:

7 de 7

MOTORIZED CONTROL VALVE

								1			
	1	INSTRUMENT TAG NUMBER			XV-980016						
	2	SERVICE			COOLING WATER - COOLING TOWERS PCH-7B-2						
	3	P&ID			7B-M-0-5-44						
ΑL	4	PIPE LINE	EQUIPMENT NUM	BER	8"-TWR-9800	8"-TWR-980016-CS1-NI -					
ĒΕ	5	EQUIPMENT MATERIAL / PIPE				CARBON STEE	EL ASTM-A106 Gr.B				
GENERAL	6	AREA CLASSIFICATION				NOTC	CLASSIFIED				
	7	ENCLOSURE CLASSIFICATION				IP 65 (MÍN.) CC	NF. NBR IEC 60529				
	8	CERTIFICATES					ERAL NOTES 2)				
	9						,				
	_	BODY TYPE			+	BUT	TERFLY				
		BODY / CAP MATERIAL					-216 Gr. WCB				
71	12	WEDGE, DISC OR GATE MATER	RIAL + COATING				-216 Gr. WCB				
RN/	⊢—	SEAT / RINGS MATERIAL + COA			+		EPDM				
VTE		SHAFT MATERIAL	77770				-216 Gr. WCB				
II QI		GASKET MATERIAL			+		PTFE				
ΆΛ	<u> </u>	CONNECTION TO THE PROCES	9		+		R - 8", 150#				
BODY AND INTERNAL	_	FLANGE FACE FINISH	<u> </u>		+		REQUIRED				
B		SEAL CLASS				NOTT	IV				
	18	SEAL CLASS					TV				
	19	TYPE OF ACTUATOR			<u> </u>	SMADT / FLE	TDIC MOTORIZED				
		TYPE OF ACTUATOR OPENING /CLOSING					TRIC MOTORIZED				
	21				DIRECT ACTION						
		FAILURE ACTION POWER SUPPLY			STATIONARY						
Ä		HANDWHEEL			3Ø - 380Vac / 60Hz						
ACTUATOR	_		0114	NITITY	YES DVAAANUFACTURED						
,UT:		ELECTRICAL CONNECTION	QUAI	NTITY	1/2" NPT(F) BY MANUFACTURER						
AC	_	SELF DIAGNOSIS			-	YES LOCAL AND REMOTE					
	-	CONFIGURATION	, OTOD								
	28	OPENING, CLOSING AND LOCA	LSTOP		LOCAL AND REMOTE						
	29				1						
	30	TVDE INDIOATION			OPEN / CLOSED						
		TYPE INDICATION			OPEN / CLOSED						
I	_	SENSOR TYPE			INDUCTIVE, WITH LOCAL INDICATION						
SWITCH	33		7/05		REED SWITCH						
SN		QUANTITY	TYPE		2 SPDT						
		CAPACITY CONTACT			2A @ 250 Vca						
_	-	ELECTRICAL CONNECTION			1/2" NPT(F)						
ACESSÓR.	37	IDENTIFICATION PLATE	10.15.0		YES (SEE GENERAL NOTES 1)						
CES.	38	CONFIGURATION MANUAL (HAI	NDHELD)		1		YES				
Ă	39	511115	D. W. COLO AL . C. T. T. T.		0//// 55.1						
	40	FLUID	PHYSICAL STATE	·	CHILLED V		LIQU				
S	41	MINIMUM FLOW	NORMAL	MAXIMUM	202.6	202.6	202.6	m³/h			
NO.	42	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	37	37	37	°C			
DIT.	43		NORMAL	MAXIMUM	0.97	0.97	0.99	bar-g			
OPERATING CONDITIONS	44	MINIMUM DOWNSTREAM PRESSURE		MAXIMUM	0.77	0.77	0.79	bar-g			
9	45	DESIGN PRESSURE	DESIGN TEMPERA	ATURE	4.6 bar-g 37 °C						
4 <i>TI</i> /	46	VISCOSITY @ OPERATING CON				0.69	·				
ER/	47	DENSITY @ OPERATING COND	ITION		1	995.3					
OP	48	SUSPENDED SOLIDS (%)					NO				
	49	SPECIAL FLUID CONDITIONS			1		NO				
	50	M.M. / Z / Cp/Cv			/						
	51	MANUFACTURER					RK/AUMA				
	52	MODEL				IQ (F	ROTORK)				

NOTES:

- THE SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER. 1-
 - THE INSTRUMENT SHALL BE PREPARED TO OPERATE WITH PROPYLENE GLICOL 10% IF REQUIRED.