





CLIENT NUMBER:



DOC NUMBER:

569-DB7B-AIC-732-001

PRD-AIC-DSH-048

CLIENT:

TAKEDA/BAXALTA

PROJECT:

**BURITI EPCVM PROJECT** 

# DRUG PRODUCT - PCS - DATA SHEET PRESSURE REDUCING VALVE - SANITARY

2	26JAN2022	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
1	17NOV2021	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
0	13SEP2021	ISSUED FOR CONSTRUCTION	MAB	MAF	RSP
Α	31MAR2021	60% DD ISSUE	JHA	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV









TITLE

SHEET: 2 de 13

## PRESSURE REDUCING VALVE - SANITARY

REV.:

2

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Revision	Α	0	1	2	3	4	Revision	Α	В	0	1	2	3	Revision	Α	В	0	1	2	3
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1	Х	Χ	Х	Х			26							51						
2	Х	Χ	Х	Х			27							52						
3	Χ	Χ	Х	Х			28							53						
4	Χ	Χ	Х	Χ			29							54						
5	Х	Χ	Х	Х			30							55						
6	Х	Χ	Х	Х			31							56						
7	Χ	Χ	Х	Х			32							57						L
8	Х	Χ	Х	Х			33							58						
9	Х	Χ	Х	Х			34							59						
10	Х	Χ	Х	Х			35							60						
11	Χ	Χ	Х	Х			36							61						
12	Х	Χ	Х	Х			37							62						
13	Х	Χ	Х	Х			38							63						
14	Х	Χ	Х				39							64						
15	Х	Χ	Х				40							65						
16	Х	Χ	Х				41							66						
17	Х	Χ	Х				42							67						
18	Х	Χ					43							68						
19	Х	Χ					44							69						
20	Χ	Χ					45							70						
21	Χ	Χ					46							71						
22	Х	Χ					47							72						
23	Χ	Χ					48							73						
24	Χ	Χ					49							74						
25							50							75						

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#### PRESSURE REDUCING VALVE - SANITARY

REV.:

#### REFERENCE DOCUMENTS

	0-11-11-11-11-11-11-11-11-11-11-11-11-11
PRD-AIC-LIS-046	INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST
PRD-PIP-TSP-501	PIPE CLASS AND SPECIFICATION - TECHNICAL SPECIFICATION
PRD-AIC-LIS-010	DRUG SUBSTANCE - PCS - INSTRUMENT INDEX
7B-Z-0-2-71	P&I DIAGRAM - DRUG SUBSTANCE - CLEAN COMPRESSED AIR DISTRIBUTION
7B-Z-0-2-64	P&I DIAGRAM - DRUG SUBSTANCE - PROCESS GAS (CO2 & O2) STORAGE & DISTRIBUTION
7B-Z-0-2-35	P&I DIAGRAM - DRUG SUBSTANCE -3000L BUFFER PREP TANK, №3, TQ-3703
7B-Z-0-2-34	P&I DIAGRAM - DRUG SUBSTANCE -3000L BUFFER PREP TANK, №2, TQ-3702
7B-Z-0-2-33	P&I DIAGRAM - DRUG SUBSTANCE -500L BUFFER PREP TANK, Nº1, TQ-3701
7B-Z-0-2-31	P&I DIAGRAM - DRUG SUBSTANCE - ANION EXCHANGE CHROM - CRM-3601
7B-Z-0-2-25	P&I DIAGRAM - DRUG SUBSTANCE -4200L HARVEST TANK, №2, TQ-5902
7B-Z-0-2-24	P&I DIAGRAM - DRUG SUBSTANCE -4200L HARVEST TANK, №1, TQ-5901
7B-Z-0-2-22	P&I DIAGRAM - DRUG SUBSTANCE -3400L COLLECTION TANK, №2, TQ-5702
7B-Z-0-2-21	P&I DIAGRAM - DRUG SUBSTANCE -3400L COLLECTION TANK, Nº1, TQ-5701
7B-Z-0-2-07	P&I DIAGRAM - DRUG SUBSTANCE - SEED PREP
7B-Z-0-2-02	P&I DIAGRAM - DRUG SUBSTANCE - 4500L MEDIA PREP TANK TQ-5102
7B-Z-0-2-01	P&I DIAGRAM - DRUG SUBSTANCE - 250L MEDIA PREP TANK, TQ-5101 & MEDIA DIST.

#### **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- The manufacturer must send the valve calculation memory.
- 3- The maximum permissible noise level is 82 dbA to 1 mt from the valve and must comply with ISA 75.17 and IEC 60534-8-4 standards.
- 4- If necessary the manufacturer should offer silencer along with the valve.
- 5- The maximum and minimum flow rates to be controlled should be limited to 90 % and 10%, respectively, of the available stroke of the control valve.
- 6- The parts in contact with the process fluid must have mechanical sanding internally standard ASME BPE SF4 with Max Ra. 0.38 μm according to table SF-2.4-1 ASME BPE-2019 and external. Ra max. 0.8 μm.

#### **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 1 - NOTES**

- 1 ADDED INSTRUMENTS: PCV-700033
- 2 CANCELED INSTRUMENTS: PCV-230021 / PCV-700041 / PCV-370104 / PCV-370204 / PCV-370304









TITLE

# PRESSURE REDUCING VALVE - SANITARY

4 de 13 REV.:

								2		
	1	INSTRUMENT TAG NUMBER			PCV-650110					
	2	SERVICE			CLEAN STEAM SU	IPPLY TQ-5201	/ 5202/ 5203, HEADI	ER CONDENSATE		
	3	P&ID				7B-	-Z-0-2-64			
	4	PIPE LINE	EQUIPMENT NUM	BER	7B-1 1/2"-SFI-650	142-SS10-HC	-			
GENERAL	5	EQUIPMENT MATERIAL / PIPE			ASTM A270 Gr. TP316L					
3EN		INTERNAL DIAMETER LINE	LINE THICKNESS		34,8		1,65	mm		
Ĭ		FUNCTION			PRESSURE REGULATING VALVE					
	8	CERTIFICATES			(SEE GENERAL NOTES 6)					
	9				(SEE GENERAL NOTES 0)					
	_	BODY TYPE				DIAPHRAGM	/ SELF OPERATED			
	_	BODY MATERIAL + COATING					S1016L			
		PLUG MATERIAL + COATING					S1016L			
₽F		SEED MATERIAL + COATING					S1016L			
ER		CHARACTERISTIC					=%			
Ĭ		ENTRY DIAMETER	OUTPUT DIAMETE	:D	38.1 mm	(NOTE 1)		n (NOTE 1)		
ND ND		NORM / CLASS / FACE	TOO IT OT BINWETE	-11			(SEE GENERAL NO			
BODY AND INTERNAL		LEAKAGE CLASS			10 - Ac	SIVIE DF E-2019	IV	123 0)		
ВО		CASTLE TYPE				CT.	ANDARD			
		RANGEABILITY								
	19	RANGEABILITY				(SEE GEN	ERAL NOTES 5)			
-	20	TYPE			SPRING / DIAPHRAGM					
	_				YES					
		PILOT					, TES			
2		AIR SUPPLY AVAILABLE				TYTEDNAL TO		<u> </u>		
ACTUATOR		TYPE OF PRESSURE OUTLET			<u> </u>		THE DOWNSTREAM			
T.		DIAPHRAGM MATERIAL					PTFE			
Α		SPRING ACTUATION BAND			UFACTURER					
	_	CONTROL POINT			bar-g					
		FAILURE CONDITION				C	LOSED			
	27	T400N10			YES (SEE GENERAL NOTES 1)					
ES		TAGGING				· · · · · · · · · · · · · · · · · · ·				
SOR		REGULATOR FILTER			NO REQUIRED					
ESS		MANOMETER					YES			
ACCESSORIES	33									
È	34		I		CLEAN STEAM CONDENSATE LIQUID					
	-	FLUID	PHYSICAL STATE	I	CLEAN STEAM C	UNDENSATE	LIQU			
		MINIMUM FLOW	NORMAL	MAXIMUM				m³/h		
	_	MINIMUM PRESSURE	NORMAL	MAXIMUM				bar-g		
NS		MINIMUM TEMPERATURE	NORMAL	MAXIMUM		L		°C		
TIO		DESIGN PRESSURE	DESIGN TEMPERA			bar-g		°C		
ND I		MINIMUM DP	NORMAL	MAXIMUM			1	bar		
300		CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	NOTE 3		
OPERATING CONDITIONS		CV SELECTED	% ABERTURA DA	VALVULA	NO.	T2 2		OTE 2		
RA	-	MAXIMUM PERMISSIBLE DIN					NOT			
OPE		DENSITY @ OPERATING COND					kg/m³			
		VISCOSITY @ OPERATING CON					сР			
		VISCOSITY @ OPERATING CON	1				cP			
		MOLECULAR MASS	FACTOR k=Cp/Cv							
<u> </u>	48				OTERIE OW					
		MANUFACTURER			STERIFLOW					
	50	MODEL								

- 1- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
- 2- The SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER.
- THE MANUFACTURER MUST SEND VALVE CALCULATION MEMORY.
- PROCESS VALUES SET FOR PRICE TAKING AND MUST BE CONFIRMED IN THE PROJ. Detailing.









TITLE

# PRESSURE REDUCING VALVE - SANITARY

5 de 13 REV.:

								2		
	1	INSTRUMENT TAG NUMBER			PCV-650111					
	2	SERVICE			CLEA	N STEAM FOR	R HEADER CONDEN	ISATE		
	3	P&ID				7B	-Z-0-2-64			
	4	PIPE LINE	EQUIPMENT NUM	BER	7B-2"-SFI-65012	9-SS10-HC		-		
GENERAL	5	EQUIPMENT MATERIAL / PIPE					1 270 Gr. TP316L			
H		INTERNAL DIAMETER LINE	LINE THICKNESS		47,5 mm 1,65 mm					
		FUNCTION			PRESSURE REGULATING VALVE					
	8	CERTIFICATES			(SEE GENERAL NOTES 6)					
	9				(======================================					
	<u> </u>	BODY TYPE			DIAPHRAGM / SELF OPERATED					
		BODY MATERIAL + COATING					S1016L			
		PLUG MATERIAL + COATING					S1016L			
¥		SEED MATERIAL + COATING					S1016L			
BODY AND INTERNAL		CHARACTERISTIC					=%			
		ENTRY DIAMETER	OUTPUT DIAMETE	:D	50.9 mm	(NOTE 1)		ım (NOTE 1)		
12		NORM / CLASS / FACE	OOTFOT DIAMETE	-N			(SEE GENERAL NO			
1		LEAKAGE CLASS			10 - A	DIVIE DF E-2019	IV	7123 0)		
BO						OT.	ANDARD			
		CASTLE TYPE RANGEABILITY								
	19	RANGEABILITY				(SEE GEN	IERAL NOTES 5)			
-	20	TYPE			SPRING / DIAPHRAGM					
					YES					
		PILOT AIR SUPPLY AVAILABLE					-			
۳		TYPE OF PRESSURE OUTLET			 	VTERNAL TO		NA		
AT0							THE DOWNSTREA	IVI		
ACTUATOR		DIAPHRAGM MATERIAL					PTFE			
\		SPRING ACTUATION BAND			NUFACTURER					
		CONTROL POINT					1 bar-g			
	_	FAILURE CONDITION					CLOSED			
	27	TAGOING			VEQ (SEE CENEDAL MOTES 4)					
ES		TAGGING			YES (SEE GENERAL NOTES 1)  NO REQUIRED					
l %		REGULATOR FILTER				NOF				
ACCESSORIES		MANOMETER					YES			
ACC	33									
_	34	ELLUD	DUVELCAL STATE		CLEAN STEAM C	ONDENCATE	I	LUD		
		FLUID	PHYSICAL STATE	IMANIMUM	CLEAN STEAM C	ONDENSATE	LIQ	UID m3/h		
		MINIMUM FLOW	NORMAL	MAXIMUM				m³/h		
		MINIMUM PRESSURE	NORMAL	MAXIMUM MAXIMUM				bar-g °C		
SNS		MINIMUM TEMPERATURE DESIGN PRESSURE	NORMAL			har a		°C		
OPERATING CONDITIONS			DESIGN TEMPERA			bar-g	<u> </u>			
J S		MINIMUM DP	NORMAL	MAXIMUM	NOTE 2		NOTE 2	bar		
] č		CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	NOTE 3		
ĕ		CV SELECTED	% ABERTURA DA	VALVULA	NO	T2 2	l l	IOTE 2		
ERA		MAXIMUM PERMISSIBLE DIN	UTION				NOT			
do		DENSITY @ OPERATING COND VISCOSITY @ OPERATING CON					kg/m³ cP			
							cР			
		VISCOSITY @ OPERATING COM	1							
		MOLECULAR MASS	FACTOR k=Cp/Cv							
$\vdash$	48	MANUIFACTURER			STERIFLOW					
		MANUFACTURER				511	ENIFLOW			
	50	MODEL			1					

- 1- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
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NUMBER: CLIENT NR: PRD-AIC-DSH-048 569-DB7B-AIC-732-001

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REV.:

#### PRESSURE REDUCING VALVE - SANITARY

2 INSTRUMENT TAG NUMBER PCV-650112 2 SERVICE CLEAN STEAM SUPPLY FOR HEADER AND CONDENSATE P&ID 7B-Z-0-2-64 3 PIPE LINE **EQUIPMENT NUMBER** 7B-1 1/2"-SFI-650148-SS10-HC 4 ASTM A270 Gr. TP316L EQUIPMENT MATERIAL / PIPE INTERNAL DIAMETER LINE LINE THICKNESS 34,8 mm FUNCTION PRESSURE REGULATING VALVE CERTIFICATES (SEE GENERAL NOTES 6) 8 9 BODY TYPE DIAPHRAGM / SELF OPERATED 10 11 BODY MATERIAL + COATING SS1016L 12 PLUG MATERIAL + COATING SS1016L INTERNAL 13 SEED MATERIAL + COATING SS1016L 14 CHARACTERISTIC 15 ENTRY DIAMETER OUTPUT DIAMETER 38,1 mm (NOTE 1) 50,8 mm (NOTE 1) AND 16 NORM / CLASS / FACE TC - ASME BPE-2019 (SEE GENERAL NOTES 6) BODY 17 LEAKAGE CLASS 18 CASTLE TYPE STANDARD 19 RANGEABILITY (SEE GENERAL NOTES 5) 20 19 TYPE SPRING / DIAPHRAGM 20 PILOT YES 21 AIR SUPPLY AVAILABLE ACTUATOR TYPE OF PRESSURE OUTLET EXTERNAL TO THE DOWNSTREAM 22 23 DIAPHRAGM MATERIAL PTFE 24 SPRING ACTUATION BAND BY MANUFACTURER 25 CONTROL POINT 1 bar-o 26 FAILURE CONDITION CLOSED 27 TAGGING YES (SEE GENERAL NOTES 1) 30 ACCESSORIES 31 REGULATOR FILTER NO REQUIRED 32 MANOMETER YES 33 34 35 FLUID PHYSICAL STATE CLEAN STEAM CONDENSATE LIQUID MINIMUM FLOW NORMAL MAXIMUM 36 m³/h 37 MINIMUM PRESSURE MAXIMUM bar-g NORMAL 38 MINIMUM TEMPERATURE NORMAL MAXIMUM °C **OPERATING CONDITIONS** 39 DESIGN PRESSURE DESIGN TEMPERATURE bar-q 40 MINIMUM DP NORMAL MAXIMUM bar 41 CV CALCULATED MINIMUM NORMAL MAXIMUM NOTE 3 NOTE 3 NOTE 3 42 CV SELECTED % ABERTURA DA VÁI VUI A NOT2 2 NOTE 2 43 MAXIMUM PERMISSIBLE DIN NOT 44 DENSITY @ OPERATING CONDITION ka/m<sup>3</sup> 45 VISCOSITY @ OPERATING CONDITION сΡ 46 VISCOSITY @ OPERATING CONDITION сΡ 47 MOLECULAR MASS FACTOR k=Cp/Cv MANUFACTURER STERIFLOW 49

#### NOTES:

50 MODEL

- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
- The SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER.
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TITLE

### PRESSURE REDUCING VALVE - SANITARY

7 de 13 REV.:

								2			
	1	INSTRUMENT TAG NUMBER			PCV-650113						
	2	SERVICE			CLEAN STE	AM SUPPLY FO	OR HEADER AND	CONDENSATE			
	3	P&ID				7B	-Z-0-2-64				
A.	4	PIPE LINE	EQUIPMENT NUM	BER	7B-2"-SFI-65010	06-SS10-HC		-			
GENERAL	5	EQUIPMENT MATERIAL / PIPE			ASTM A270 Gr. TP316L						
GEN	6	INTERNAL DIAMETER LINE	LINE THICKNESS		34,8 mm 1,65 mm						
	7	FUNCTION				PRESSURE R	L EGULATING VALV	'E			
	8	CERTIFICATES			(SEE GENERAL NOTES 6)						
	9						<u> </u>				
	10	BODY TYPE			DIAPHRAGM / SELF OPERATED						
	11	BODY MATERIAL + COATING				S	S1016L				
	12	PLUG MATERIAL + COATING				S	S1016L				
NAL	13	SEED MATERIAL + COATING				S	S1016L				
BODY AND INTERNAL		CHARACTERISTIC					=%				
N		ENTRY DIAMETER	OUTPUT DIAMETE	ER .	50,8 mm	(NOTE 1)	76,2 1	mm (NOTE 1)			
ANE		NORM / CLASS / FACE	1				(SEE GENERAL N	. ,			
ЮΥ		LEAKAGE CLASS					IV	,			
BC		CASTLE TYPE				ST	ANDARD				
	19	RANGEABILITY				(SEE GEN	ERAL NOTES 5)				
	20				(SEE GENERAL NOTES 5)						
	<u> </u>	TYPE			SPRING / DIAPHRAGM						
	20	PILOT			YES						
TUATOR		AIR SUPPLY AVAILABLE					_				
	22	TYPE OF PRESSURE OUTLET			- E	EXTERNAL TO	THE DOWNSTRE	AM			
	23	DIAPHRAGM MATERIAL					PTFE				
		SPRING ACTUATION BAND				BY MAN	IUFACTURER				
⋖		CONTROL POINT					1 bar-g				
	26	FAILURE CONDITION					LOSED				
	27										
· · ·	30	TAGGING			YES (SEE GENERAL NOTES 1)						
ACCESSORIES	31	REGULATOR FILTER			NO REQUIRED						
SSOI	32	MANOMETER					YES				
CES	33										
AC	34										
	35	FLUID	PHYSICAL STATE		CLEAN STEAM C	ONDENSATE	LI	QUID			
		MINIMUM FLOW	NORMAL	MAXIMUM	1			m³/h			
		MINIMUM PRESSURE	NORMAL	MAXIMUM				bar-g			
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C			
ONS		DESIGN PRESSURE	DESIGN TEMPERA			l bar-g		°C			
OPERATING CONDITIONS		MINIMUM DP	NORMAL	MAXIMUM		-		bar			
NO.		CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	NOTE 3			
200	_	CV SELECTED	% ABERTURA DA			<b>I</b> T2 2		NOTE 2			
ATI		MAXIMUM PERMISSIBLE DIN	1				NOT				
ZER.		DENSITY @ OPERATING COND	ITION		1		kg/m³				
Ö		VISCOSITY @ OPERATING COM			1		cР				
	_	VISCOSITY @ OPERATING CO			1		сР				
		MOLECULAR MASS	FACTOR k=Cp/Cv		1						
	48		<u> </u>								
	_	MANUFACTURER			STERIFLOW						
		MODEL			OTENIE EST						
_		l			1						

- 1- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
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#### PRESSURE REDUCING VALVE - SANITARY REV.:

	1	INSTRUMENT TAG NUMBER				PC'	V-650114				
	2	SERVICE			CLEAN STE	AM SUPPLY FO	R HEADER AND	CONDENSATE			
	3	P&ID				7B-	-Z-0-2-64				
¥	4	PIPE LINE	EQUIPMENT NUMI	BER	7B-1"-SFI-65012	20-SS10-HC		-			
GENERAL	5	EQUIPMENT MATERIAL / PIPE				ASTM A2	70 Gr. TP316L				
B	6	INTERNAL DIAMETER LINE	LINE THICKNESS		22,1	mm	1,	65 mm			
	7	FUNCTION			PRESSURE REGULATING VALVE						
	8	CERTIFICATES				(SEE GEN	ERAL NOTES 6)				
	9										
	10	BODY TYPE			DIAPHRAGM / SELF OPERATED						
	11	BODY MATERIAL + COATING				S	S1016L				
	12	PLUG MATERIAL + COATING			SS1016L						
BODY AND INTERNAL	13	SEED MATERIAL + COATING				S	S1016L				
I ER	14	CHARACTERISTIC					=%				
<u>≅</u>	15	ENTRY DIAMETER	OUTPUT DIAMETE	:R	25,4 mm	(NOTE 1)	38,1	mm (NOTE 1)			
AN	16	NORM / CLASS / FACE				· · · · · · · · · · · · · · · · · · ·	(SEE GENERAL				
ַל	17	LEAKAGE CLASS					IV	•			
ĕ		CASTLE TYPE				STA	ANDARD				
	19	RANGEABILITY				(SEE GEN	ERAL NOTES 5)				
	20										
	<u> </u>	TYPE			SPRING / DIAPHRAGM						
		PILOT			YES						
	_	AIR SUPPLY AVAILABLE									
ACTUATOR		TYPE OF PRESSURE OUTLET				EXTERNAL TO	THE DOWNSTRE	-AM			
		DIAPHRAGM MATERIAL					PTFE				
	_	SPRING ACTUATION BAND					UFACTURER				
⋖		CONTROL POINT					l bar-g				
		FAILURE CONDITION					LOSED				
	27										
,	_	TAGGING			YES (SEE GENERAL NOTES 1)						
ACCESSORIES		REGULATOR FILTER			NO REQUIRED						
Š		MANOMETER					YES				
	33										
Ą	34										
	<u> </u>	FLUID	PHYSICAL STATE		CLEAN STEAM C	ONDENSATE	1	IQUID			
		MINIMUM FLOW		MAXIMUM				m³/h			
		MINIMUM PRESSURE	NORMAL	MAXIMUM				bar-g			
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C			
2		DESIGN PRESSURE	DESIGN TEMPERA			l bar-g		°C			
<u> </u>		MINIMUM DP	NORMAL	MAXIMUM				bar			
OPERATING CONDITIONS		CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3	<u> </u>	NOTE 3	NOTE 3			
ر و	_	CV SELECTED	% ABERTURA DA			<b> </b> T2 2		NOTE 2			
		MAXIMUM PERMISSIBLE DIN	1.0. ADELTIONADA		l NO		NOT				
ל ע		DENSITY @ OPERATING COND	ITION				kg/m³				
5		VISCOSITY @ OPERATING CON					cP				
		VISCOSITY @ OPERATING CON			1		cP				
	_	MOLECULAR MASS	FACTOR k=Cp/Cv				<u> </u>				
		INIOLEOULAIN INIAGG	I ACTOR K-Op/OV								
-	48	MANUEACTURER			STERIFLOW						
		MANUFACTURER				316	INIFLOW				
	50	MODEL									

- 1- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
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# PRESSURE REDUCING VALVE - SANITARY

REV.:

ļ								2			
	1	INSTRUMENT TAG NUMBER			PCV-700031						
	2	SERVICE			CLEAN CO	MP. AIR TO M	AB LOAD FILT. SKID	, CFIL-3300			
	3	P&ID					-Z-0-2-71	,			
	_	PIPE LINE	EQUIPMENT NUM	BER	7B-1/2"-CAP-700		] .				
GENERAL		EQUIPMENT MATERIAL / PIPE					I 270 Gr. TP316L				
EN SEN		INTERNAL DIAMETER LINE	LINE THICKNESS		9.4	mm	1,65	mm			
		FUNCTION	LINE THIORIVEOU		PRESSURE REGULATING VALVE						
	8	CERTIFICATES									
	9	OLIVIII IOATEO			(SEE GENERAL NOTES 6)						
	_	BODY TYPE			DIAPHRAGM / SELF OPERATED						
	_	BODY MATERIAL + COATING									
		PLUG MATERIAL + COATING			SS1016L						
<b>I</b> AL		SEED MATERIAL + COATING			SS1016L						
BODY AND INTERNAL		CHARACTERISTIC			SS1016L =%						
<u>⊾</u>		ENTRY DIAMETER	OUTPUT DIAMETE	:D	12.7 mm	(NOTE 1)		m (NOTE 1)			
ND ND		NORM / CLASS / FACE	OOTFOT DIAMETE	IN .		· · · · · · · · · · · · · · · · · · ·	(SEE GENERAL NO				
<u>γ</u>	_	LEAKAGE CLASS			10 - Ac	DIVIE DE E-2018	IV	7123 0)			
BO		CASTLE TYPE				СТ	ANDARD				
		RANGEABILITY					IERAL NOTES 5)				
	20	NANGEABILITI				(SEE GEN	IERAL NOTES 3)				
_	_	TYPE				SDDING	/ DIAPHRAGM				
		PILOT			YES						
		AIR SUPPLY AVAILABLE					-				
<u>۾</u>		TYPE OF PRESSURE OUTLET			ļ	EXTERNAL TO	THE DOWNSTREA	M			
ACTUATOR		DIAPHRAGM MATERIAL			-		PTFE	v.			
CTL		SPRING ACTUATION BAND			NUFACTURER						
<		CONTROL POINT					3 bar-g				
		FAILURE CONDITION					CLOSED				
	27				OLGGED						
	-	TAGGING			YES (SEE GENERAL NOTES 1)						
NES	31	REGULATOR FILTER				•	REQUIRED				
SSOI	32	MANOMETER					YES				
ACCESSORIES	33										
AC	34										
	35	FLUID	PHYSICAL STATE		CLEAN AIR AIR						
	36	MINIMUM FLOW	NORMAL	MAXIMUM		16,8		m³/h			
	37	MINIMUM PRESSURE	NORMAL	MAXIMUM		3		bar-g			
	38	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C			
ONS	39	DESIGN PRESSURE	DESIGN TEMPERA	ATURE		bar-g		°C			
DITI	40	MINIMUM DP	NORMAL	MAXIMUM				bar			
NO.	41	CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	NOTE 3			
190	42	CV SELECTED	% ABERTURA DA	válvula	NO.	T2 2	N	OTE 2			
OPERATING CONDITIONS	43	MAXIMUM PERMISSIBLE DIN					NOT				
PER	44	DENSITY @ OPERATING COND	ITION				kg/m³				
Ō	45	VISCOSITY @ OPERATING CON	IDITION				сР				
	46	VISCOSITY @ OPERATING CON	IDITION				сР				
	47	MOLECULAR MASS	FACTOR k=Cp/Cv								
	48		•								
	49	MANUFACTURER			STERIFLOW						
	50	MODEL									
					-						

- 1- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
- 2- The SELECTED CV AND THE OPENING PERCENTAGE MUST BE SUPPLIED BY THE VALVE MANUFACTURER.
- THE MANUFACTURER MUST SEND VALVE CALCULATION MEMORY.
- PROCESS VALUES SET FOR PRICE TAKING AND MUST BE CONFIRMED IN THE PROJ. Detailing.









NUMBER: CLIENT NR: PRD-AIC-DSH-048 569-DB7B-AIC-732-001

TITLE

10 de 13

REV.:

### PRESSURE REDUCING VALVE - SANITARY

		SURE REDUCING VA	LVL	-4.1					2		
	1	INSTRUMENT TAG NUMBER			1	PC	V-700033	3	-		
		SERVICE			CLEAN COMP. AIR						
		P&ID					3-Z-0-2-81				
		PIPE LINE	EQUIPMENT NUM	RER	1/2"-CAP-70000		)	_			
ERA		EQUIPMENT MATERIAL / PIPE	Legon MEIVI IVOM		1/2 6/11 / 0000	ASTM A270 Gr. TP316L					
GENERAL		INTERNAL DIAMETER LINE	LINE THICKNESS		9.4	9,4 mm 1,65 mm					
		FUNCTION	LINE THIORIVEOU		0,4	PRESSURE REGULATING VALVE					
	8	CERTIFICATES			(SEE GENERAL NOTES 6)						
	9	OLIVIII IO/VIEG			(OLL GENERAL MOTEGO)						
		BODY TYPE			DIAPHRAGM / SELF OPERATED						
		BODY MATERIAL + COATING					SS1016L	DI LIVILD			
		PLUG MATERIAL + COATING					SS1016L				
¥		SEED MATERIAL + COATING					SS1016L				
BODY AND INTERNAL		CHARACTERISTIC					=%				
Ι <u>Ε</u>		ENTRY DIAMETER	OUTPUT DIAMETE		12.7 mm	(NOTE 1)	-70	12 7 mr	n (NOTE 1)		
AND		NORM / CLASS / FACE	TOOTI OT BIAWLETE	-11		SME BPE-2019	SEE GE				
٥,		LEAKAGE CLASS			10-70	SIVIL DI L-201	IV	LIVEL IVO	120 0)		
BO		CASTLE TYPE				SI	ANDARD	)			
		RANGEABILITY				(SEE GEN					
	20	IVANOLABILITI				(OLL OLI	VEIVAL IN	J1L3 3)			
$\vdash$		TYPE				SPRING	/ DIAPHE	RAGM			
		PILOT	SPRING / DIAPHRAGM YES								
		AIR SUPPLY AVAILABLE					-				
ద		TYPE OF PRESSURE OUTLET			-	EXTERNAL TO	THE DO	WNSTREAM	1		
IATC		DIAPHRAGM MATERIAL					PTFE		•		
ACTUATOR		SPRING ACTUATION BAND				BY MAI	NUFACTL	IRFR			
⋖		CONTROL POINT			3 bar-g						
		FAILURE CONDITION			CLOSED						
	27				1						
		TAGGING			YES (SEE GENERAL NOTES 1)						
RIE	31	REGULATOR FILTER				NO	REQUIRE	D			
sso	32	MANOMETER					YES				
ACCESSORIES	33										
AC	34										
	35	FLUID	PHYSICAL STATE		CLEAN AIR AIR						
	36	MINIMUM FLOW	NORMAL	MAXIMUM		16,8			m³/h		
	37	MINIMUM PRESSURE	NORMAL	MAXIMUM		3			bar-g		
ا <sub>د</sub>	38	MINIMUM TEMPERATURE	NORMAL	MAXIMUM					°C		
ŇOI	39	DESIGN PRESSURE	DESIGN TEMPERA	ATURE		bar-g			°C		
IDIT	40	MINIMUM DP	NORMAL	MAXIMUM					bar		
00	41	CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	3	NOTE 3		
OPERATING CONDITIONS	42	CV SELECTED	% ABERTURA DA	VÁLVULA	NO	T2 2		N	OTE 2		
3ATI	43	MAXIMUM PERMISSIBLE DIN					NOT				
PEF	44	DENSITY @ OPERATING COND	ITION				kg/m³				
	45	VISCOSITY @ OPERATING CON	IDITION				сР				
	46	VISCOSITY @ OPERATING CON	IDITION				cP .				
	47	MOLECULAR MASS	FACTOR k=Cp/Cv								
	48										
	49	MANUFACTURER			STERIFLOW						
	50	MODEL									

- 1- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
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TITLE

### PRESSURE REDUCING VALVE - SANITARY

11 de 13 REV.:

								2			
	1	INSTRUMENT TAG NUMBER			PCV-700034						
	2	SERVICE				CLE	AN COMP.				
ľ	3	P&ID				7B	-Z-0-2-71				
<sub>₽</sub> Ì	4	PIPE LINE	EQUIPMENT NUM	BER	7B-2"-CAP-7000	19-SS10-NI		-			
GENERAL	5	EQUIPMENT MATERIAL / PIPE			ASTM A270 Gr. TP316L						
ן עַּי	6	INTERNAL DIAMETER LINE	LINE THICKNESS		47,5	mm	1,65	mm			
	7	FUNCTION				PRESSURE R	I EGULATING VALVE				
ŀ	8	CERTIFICATES			(SEE GENERAL NOTES 6)						
ŀ	9					<u> </u>	<u> </u>				
7	10	BODY TYPE				DIAPHRAGM / SELF OPERATED					
ŀ	11	BODY MATERIAL + COATING				S	S1016L				
	12	PLUG MATERIAL + COATING				S	S1016L				
\$		SEED MATERIAL + COATING			SS1016L SS1016L						
1		CHARACTERISTIC					=%				
[		ENTRY DIAMETER	50,8 mm	(NOTE 1)	50,8 m	ım (NOTE 1)					
[		NORM / CLASS / FACE	OUTPUT DIAMETE			, ,	(SEE GENERAL NO				
		LEAKAGE CLASS					IV				
۱ ا		CASTLE TYPE				ST	ANDARD				
ŀ	19	RANGEABILITY				(SEE GEN	IERAL NOTES 5)				
ŀ	20				(SEE GENERAL NOTES 5)						
┪		TYPE			SPRING / DIAPHRAGM						
ŀ		PILOT			YES						
ŀ		AIR SUPPLY AVAILABLE					-				
TUATOR		TYPE OF PRESSURE OUTLET			F	XTERNAL TO	THE DOWNSTREA	M			
		DIAPHRAGM MATERIAL			-		PTFE				
		SPRING ACTUATION BAND				BY MAN	NUFACTURER				
۱ ٔ		CONTROL POINT					3 bar-g				
ŀ		FAILURE CONDITION					CLOSED				
ŀ	27	TAILORE GONDITION					LOOLD				
$\dashv$		TAGGING			YES (SEE GENERAL NOTES 1)						
		REGULATOR FILTER			NO REQUIRED						
5		MANOMETER			YES						
SOCCOOLINE O	33	INANONETER					123				
Ź	34										
$\dashv$		FLUID	PHYSICAL STATE		CLEAN A	\IP	Ι Δ	IR			
-		MINIMUM FLOW	NORMAL	MAXIMUM	OLLAN A	16,8		m³/h			
-		MINIMUM PRESSURE	NORMAL	MAXIMUM		3		bar-g			
-		MINIMUM TEMPERATURE	NORMAL	MAXIMUM		J		°C			
}		DESIGN PRESSURE	DESIGN TEMPERA	I .		bar-g		°C			
{ }		MINIMUM DP	NORMAL	MAXIMUM		₽ui-y	<u> </u>	bar			
		CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	NOTE 3			
;		CV SELECTED	% ABERTURA DA	I .	NOTE 3	[2 2		IOTE 2			
1		MAXIMUM PERMISSIBLE DIN	ADEITIONA DA	V, (E V OLA	NO		NOT	IV I L L			
1			ITION				kg/m³				
;		DENSITY @ OPERATING COND VISCOSITY @ OPERATING CON					cP				
Ö		_					cР				
		VISCOSITY @ OPERATING CON									
		MOLECULAR MASS	FACTOR k=Cp/Cv								
	48	MANUFACTURER				C.T.	ERIFLOW				

- THE MANUFACTURER MUST CONFIRM THE NOMINAL DIAMETER OF THE VALVE.
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TITLE

# PRESSURE REDUCING VALVE - SANITARY

REV.:

12 de 13

PR	ES	SURE REDUCING VA	LVE - SANITA	ARY				REV.: <b>2</b>		
	1	INSTRUMENT TAG NUMBER			I	PC	V-700035	_		
	2	SERVICE				CLE	AN COMP.			
	3	P&ID				7E	3-Z-0-2-71			
	4	PIPE LINE	EQUIPMENT NUM	BER	7B-2"-CAP-7000	15-SS10-NI	1 -			
ER/	5	EQUIPMENT MATERIAL / PIPE				ASTM A	1 270 Gr. TP316L			
GENERAL	6	INTERNAL DIAMETER LINE	LINE THICKNESS		47,5	mm	1,65	mm		
		FUNCTION			PRESSURE REGULATING VALVE					
		CERTIFICATES			(SEE GENERAL NOTES 6)					
	9					`	<u> </u>			
	10	BODY TYPE				DIAPHRAGM	I / SELF OPERATED			
	11	BODY MATERIAL + COATING			SS1016L					
١.	12	PLUG MATERIAL + COATING			SS1016L					
BODY AND INTERNAL	13	SEED MATERIAL + COATING				S	SS1016L			
TEF	14	CHARACTERISTIC					=%			
_ ⊆	15	ENTRY DIAMETER	OUTPUT DIAMET	ER .	50,8 mm	(NOTE 1)	50,8 mr	n (NOTE 1)		
AN	16	NORM / CLASS / FACE			TC - AS	SME BPE-2019	(SEE GENERAL NO	TES 6)		
OD	17	LEAKAGE CLASS					IV			
В	18	CASTLE TYPE				ST	ANDARD			
	19	RANGEABILITY				(SEE GEN	IERAL NOTES 5)			
	20				, , , , , , , , , , , , , , , , , , ,					
	19	TYPE				SPRING	/ DIAPHRAGM			
	20	PILOT					YES			
	21	AIR SUPPLY AVAILABLE					-			
TOR	22	TYPE OF PRESSURE OUTLET			E	EXTERNAL TO	THE DOWNSTREAM	1		
ACTUATOR	23	DIAPHRAGM MATERIAL					PTFE			
AC.	24	SPRING ACTUATION BAND		BY MAN	NUFACTURER					
	25	CONTROL POINT					3 bar-g			
		FAILURE CONDITION				(	CLOSED			
	27									
ES		TAGGING			YES (SEE GENERAL NOTES 1)					
ORI		REGULATOR FILTER			NO REQUIRED VES					
ACCESSORIES		MANOMETER					YES			
ACC	33									
<u> </u>	34	51110	IDUNOIONI OTATE		OLEAN	AID	1	<u> </u>		
		FLUID	PHYSICAL STATE		CLEAN		All			
		MINIMUM FLOW	NORMAL	MAXIMUM		16,8		m³/h		
		MINIMUM PRESSURE MINIMUM TEMPERATURE	NORMAL NORMAL	MAXIMUM MAXIMUM		3		bar-g °C		
SNS		DESIGN PRESSURE	DESIGN TEMPER			bar-g		°C		
OPERATING CONDITIONS		MINIMUM DP	NORMAL	MAXIMUM		Sui-g	<u>'                                    </u>	bar		
ONE		CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	NOTE 3		
lG C		CV SELECTED	% ABERTURA DA	I .		<b>I</b> T2 2		OTE 2		
NIT!		MAXIMUM PERMISSIBLE DIN	1	·			NOT			
řER,		DENSITY @ OPERATING COND	ITION				kg/m³			
p		VISCOSITY @ OPERATING CON					cP			
		VISCOSITY @ OPERATING CON					cР			
		MOLECULAR MASS	FACTOR k=Cp/Cv		U U					
	48		· ·							
		MANUFACTURER	STERIFLOW							
		MODEL								
					i					

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TITLE

# PRESSURE REDUCING VALVE - SANITARY

13 de 13 REV.:

								2	
	1	INSTRUMENT TAG NUMBER	PCV-700036						
GENERAL	2	SERVICE			CLEAN COMP.				
	3	P&ID			7B-Z-0-2-71				
	4	PIPE LINE EQUIPMENT NUMBER			7B-1"-CAP-700005-SS10-NI -				
	5	EQUIPMENT MATERIAL / PIPE			ASTM A270 Gr. TP316L				
		INTERNAL DIAMETER LINE LINE THICKNESS			22,1 mm 1,65 mm				
		FUNCTION			PRESSURE REGULATING VALVE				
	8	CERTIFICATES			(SEE GENERAL NOTES 6)				
	9				(011 011101101100)				
$\vdash$	_	BODY TYPE			DIAPHRAGM / SELF OPERATED				
BODY AND INTERNAL	-	BODY MATERIAL + COATING			SS1016L				
		PLUG MATERIAL + COATING			SS1016L				
		SEED MATERIAL + COATING			SS1016L SS1016L				
		CHARACTERISTIC			\$\$1016L =%				
		ENTRY DIAMETER OUTPUT DIAMETER							
							25,4 mm (NOTE 1)		
	_	NORM / CLASS / FACE			TC - ASME BPE-2019 (SEE GENERAL NOTES 6)				
		LEAKAGE CLASS			IV STANDADD				
		CASTLE TYPE			STANDARD				
		RANGEABILITY			(SEE GENERAL NOTES 5)				
	20								
	-	TYPE			SPRING / DIAPHRAGM				
	-	PILOT			YES				
1~		AIR SUPPLY AVAILABLE			-				
TOF		TYPE OF PRESSURE OUTLET			EXTERNAL TO THE DOWNSTREAM				
ACTUATOR	23	DIAPHRAGM MATERIAL			PTFE				
	24	SPRING ACTUATION BAND			BY MANUFACTURER				
	25	CONTROL POINT			3 bar-g				
	26	FAILURE CONDITION			CLOSED				
	27								
ပ္သ	30	TAGGING			YES (SEE GENERAL NOTES 1)				
JR	31	REGULATOR FILTER			NO REQUIRED				
SS	32	MANOMETER			YES				
ACCESSORIES	33								
Ā	34								
	35	FLUID	PHYSICAL STATE		CLEAN	AIR	All	₹	
	36	MINIMUM FLOW	NORMAL	MAXIMUM		16,8		m³/h	
	37	MINIMUM PRESSURE	NORMAL	MAXIMUM		3		bar-g	
OPERATING CONDITIONS	38	MINIMUM TEMPERATURE	NORMAL	MAXIMUM				°C	
	39	DESIGN PRESSURE	DESIGN TEMPERA	ATURE		bar-g		°C	
	40	MINIMUM DP	NORMAL	MAXIMUM				bar	
	41	CV CALCULATED MINIMUM	NORMAL	MAXIMUM	NOTE 3		NOTE 3	NOTE 3	
	42	CV SELECTED	% ABERTURA DA	VÁLVULA	NO.	Г2 2	N	OTE 2	
	43	MAXIMUM PERMISSIBLE DIN			NOT				
	44	DENSITY @ OPERATING CONDITION			kg/m³				
	45	VISCOSITY @ OPERATING CONDITION			сР				
	46	VISCOSITY @ OPERATING CONDITION			сР				
	47	MOLECULAR MASS FACTOR k=Cp/Cv							
	48						I		
					STERIFLOW				
		MODEL							
		, I .			I				

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