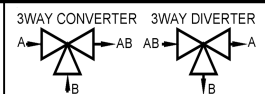


GENERAL	1	Tag Number	P&ID No.	85-UV -110111	J-85-PID-1101-0		
	2	Service			LP NITROGEN TO SC-1101		
	3	Allowable Sound Pressure Level (dBA)			<85 dBA		
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 Barg	7 Barg	10.5 Barg
	5	Fire-Safe Execution	Antistatic Device	Firesafe Design	Yes		
	6	Line: Number (In)	Size (In)	Schedule (In)	1"-CA-11006A-2ABXD-N	1 in	80
	7	Line: Number (Out)	Size (Out)	Schedule (Out)			
	8	Line Class	Pipe Material	2ABX	Carbon Steel		
	9	ISO 15848-1 Certification			Required, Zero Leakage & Double Seal		
DESIGN	10	Pressure Min / Max	Temperature Min / Max	3 bar-g	85 °C		
HAZARDOUS AREA	11	Classification			Zone 2, Temperature Class T4, Gas Group IIC		
	12	Execution	Certification	EE x (ia)	IEC / ATEX		
PROCESS CONDITIONS	13	Fluid	Fluid State	Low Pressure Nitrogen	Gas/Vapor		
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	
	15	Inlet Density			3.24	kg/m³	
	16	Molecular Mass				---	
	17	Inlet Specific Heats Ratio Cp/Cv				---	
	18	Inlet Compressibility Factor				---	
	19	Inlet Viscosity			0.018	mPa-s	
	20	Solids %					
	21	Flow Rate			20	kg/h	
	22	Inlet Pressure			2	bar-g	
	23	Pressure Drop			0.05	bar	
	24	Inlet Temperature			40	°C	
	25	Max Shut-off Differential Pressure			3	bar	
	26	Leakage Class			ANSI V		
	27	Power Failure Position	Air Failure Position	Fail Close	Fail Close		
	28	Travel Time		3 Sec			
	CALCULATION DATA	29	Flow Coefficient Cv				---
		30	Sound Pressure Level				dBA
	SELECTED VALVE	31	Type	Gate			
32		Cv	Leakage Class		ANSI V		
33		Temper. Max	DP Max	85°C	3 barg		
34		Sound Pressure Level		<85dBA			
35							
BODY	36	End Connection: Type	Flanged				
	37	Roughness	125-250 AARH				
	38	Size	1"				
	39	Rating	150#				
	40	Facing	RF				
	41	Flow Action To	NA				
	42	Bonnet Type	Lubric.	Solid Wedge	NA		
TRIM	43	Jacket and Connection	NA				
	44	Port	Solid Wedge				
	45	Plug Type	Gate				
	46	Sealing Seat / Plug	Metallic				
ACTUATOR	47	Plug Guide	Bellow seal				
	48	Type	Model	Piston			
	49	Piston Acting		Single Effect Pneumatic			
	50	Open / Close Time		3 sec			
	51	Handwh. Loc.		Not Required			
	52	Size	Spring Range	270			
	53	Travel	Travel Lock	(*)	NA		
	54	PNEUMATIC CONNECTION	Material	SS 316			
	55	CONNECTION	Size	1/4"			
	56	Execution					
	57	Model		PC 360/102/270N055NFC			
MATERIAL	57	Body / Bonnet	Jacket	A105	NA		
	58	Plug	Seat	SS 316	SS 316		
	59	Sealing	Packing	NA	Flex Graphite		
	60	Plug Guides		SS 316			
	61						
	62	Filter Regulator & Gauge		Required			
	63	Material	Model	SS316	Note-3.29		
	64	Tag Number		85-UZSH/L-110111			
	65	Quantity	Model	2	Note-3.30		
	66	Tag Number		85-UY-110111			
AIR SET	67	Quantity	Model	1	Note-3.32		
	68	Reset		Manual Reset			
LIMIT SWITCH	69	Tag Number		NA			
	70	Model		NA			
SOLENOID VALVE	71						
	72	Partial Stroke Device					
PNEUMATIC DISTRIBUTOR	73	Quick Exhaust					
	74	Air Lock					
OPTIONS	75	Actuator fire Proofing					
	76	Thermal Fuse		NA			
	77						
	78	Handswitch		Required			
	79	MR No.					
	80	PO No.					
	81	Manufacturer					
	82	Model					
	83	Supplier					
	84						

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Shut-off Valve	
1	M29	26-06-2017	Issued for Purchase		
0	DD4	13-08-2015	Issued for Approval		
Nr.	By	Date	Revision	Code: 655	Doc. No.: 3863-KK-SE-8500115
				Sheet: 340	of 405
				Rev.: 1	

Tag Number : 85-UV -110111

1. Alternative design conditions for purging operation FV, 100 °C
 2. Max Purging Condition 5 barg@48°C
 3. Critical Pressure 32.9 bar g
- Molar Mass 28.01 kg/kmol
Compressibility Factor 1.000
Cp/Cv 1.407

				INSTRUMENT SPECIFICATION Shut-off Valve	   	
1	M29	26-06-2017	Issued for Purchase		Sheet 341	of 405
0	DD4	13-08-2015	Issued for Approval			
No.	By	Date	Revision	Code: 655	Dwg. No.: 3863-KK-SE-8500115	Rev.: 1

GENERAL	1	Tag Number	P&ID No.	80-PV -320218		J-80-PID-3202-0					
	2	Service		ORG VAPOR FR R-3201 TO J-3504A/B							
	3	Allowable Sound Pressure Level (dBA)		< 85 dB(A)							
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 bar-g		7 bar-g	10.5 bar-g				
	5	Line: Number (In)	Size (In)	Schedule (In)	3"-POV-32046A-4DAYA-H		3 in 10S				
	6	Line: Number (Out)	Size (Out)	Schedule (Out)							
	7	Line Class	Pipe Material	4DAY		Stainless Steel 304 L					
	8										
DESIGN	9	Pressure Min / Max	Temperature Min / Max	15 bar-g		305 °C					
HAZARDOUS AREA	10	Classification		Zone 2, Gr. IIA & IIB, T3							
	11	Execution	Certification	EEx-ia		IEC/ATEX					
PROCESS CONDITIONS	12	Fluid	Fluid State	Organic Vapour		Gas/Vapor					
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	14	Inlet Density		1.3	1.3	1.3	kg/m³				
	15	Molecular Mass				55	---				
	16	Inlet Specific Heats Ratio Cp / Cv					---				
	17	Inlet Compressibility Factor					---				
	18	Inlet Viscosity		0.009	0.009	0.009	mPa.s				
	19	Critical Pressure		bar-g							
	20	Mass Vaporized	Solids %								
	21	Flow Rate		6	37	40	kg/h				
	22	Inlet Pressure					bar-g				
	23	Pressure Drop					bar				
	24	Inlet Temperature		100	100	100	°C				
	25	Max Shut-off Differential Pressure		16	bar						
	26	Leakage Class		ANSI III							
	27	Power Failure Position	Air Failure Position	FO		FO					
	28										
	CALCULATION DATA	29	Flow Coefficient Cv		---						
		30	Sound Pressure Level		dBA						
		31	Vendor Flow Coefficient Cv		---						
SELECTED VALVE	32	Type	Butterfly	MATERIAL	58	Body / Bonnet	Jacket	A351 CF8M	NA		
	33	Cv	Rangeability		80	59	Plug	Seat	SS316	SS316	
	34	Temp. Max	D.P. Max		305°C	15 bar	60	Plug Guides	Stem	NA	Stainless St
	35	Leakage Class			ANSI III	61	Yoke / Housing	Packing	Carbon Steel	Graphite	
BODY	36	Sound Pressure Level		POSITIONER	62	Bellows		NA			
	37	End Connection: Type	Double Flanged		63	Type	Model	E/P Smart	Note 5		
	38	Roughness	125-250 AARH		64	Input Signal Range		4-20 mA (HART)			
	39	Size	2"		65	Action		Direct			
	40	Rating	300#		66	PNEUMATIC CONNECTION	Material	Aluminium			
	41	Facing	RF		67	CONNECTION	Size	1/4"			
	42	Flow Action To	-		68	Mechanical Protection		IP65			
	43	Bonnet Type	Lubricat.		Standard	NA	69	Electrical Connection		ISO M20X1.5	
	44	Jacket & Connection			NA	70	Grounding Connection		Internal & External		
	45	Bellow Seal Required			NA	AIR SET	71	Filter Regulat. & Gauge		Required	
46	Fire Safe Required	Yes	72	Material	Model		SS316	Note 3.37			
TRIM	47	ISO 15848-1 Required	Yes	LIMIT SWITCH	73	Tag Number					
	48	Port No.	Full / Red.		Single	Full	74	Quantity	Model		
	49	Plug Type	Character.	NA	Mod. Parabo	SOLENOID VALVE	75	Tag Number			
	50	Sealing Seat / Plug		Metallic	76		Quantity	Model			
ACTUATOR	51	Balanced	Plug Guide	NA	NA	OPTIONS	77				
	52						78	Booster	Air Lock		
	53	Type	Model	Diaphragm	DYNACTAIR		PURCHASE	79	MR No.		
	54	Action	Handwh. Loc.	Direct	NA			80	PO No.		
	55	Size	Spring Range					81	Manufacturer		
	56	Travel	Travel Lock		NA			82	Model		
	57							83	Supplier		

Notes: See notes

				JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)		  	
				INSTRUMENT SPECIFICATION Control Valve		Owner Document Number	
1	SV8	12-10-2017	Issued for Purchase				
0	RC2	11-09-2015	Issued for Approval				
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8000104	Sheet: 83 of 280	Rev.: 1

1. Max Purging Condition:-
EMPTYING / DRAINAGE / PURGE
S1:
a) Fluid: Medium Pressure Nitrogen . Maximum Operating Conditions: 8.0 barg / Amb
CLEANING
B3:
a) Low Pressure Steam . Maximum Operating Conditions: 6.0 barg / 170°C; FV / 100°C
b) Fluid: Plant Air . Maximum Operating Conditions: 8.5 barg / Amb
2. DN 50 Valve.
3. Valve Pressure Drop at Open Position: Standard
4. Alternate design condition: Full Vacuum @ 305 °C
5. Positioner Model No. ECKARDT FOXBORO SRD991-BHNS7ZZZNR-V01

				INSTRUMENT SPECIFICATION Control Valve	   	
1	SV8	12-10-2017	Issued for Purchase		Sheet 84	of 280
0	RC2	11-09-2015	Issued for Approval			
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8000104	Rev.: 1

GENERAL	1	Tag Number	P&ID No.	80-PV -380123		J-80-PID-3801-0					
	2	Service		80-B-3805 BYPASS							
	3	Allowable Sound Pressure Level (dBA)		< 85 dB(A)							
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 bar-g	7 bar-g		10.5 bar-g				
	5	Line: Number (In)	Size (In)	Schedule (In)	4"-OV2-38043A-2AAYA-N		4 in 40				
	6	Line: Number (Out)	Size (Out)	Schedule (Out)							
	7	Line Class	Pipe Material	2AAY		Carbon Steel					
	8										
DESIGN	9	Pressure Min / Max	Temperature Min / Max	-0.2 3.5 bar-g		120 120 °C					
HAZARDOUS AREA	10	Classification		Zone 2, Gr. IIA & IIB, T3							
	11	Execution	Certification	EEx-ia		IEC/ATEX					
PROCESS CONDITIONS	12	Fluid	Fluid State	Organic Vents		Gas/Vapor					
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	14	Inlet Density					kg/m³				
	15	Molecular Mass				28	---				
	16	Inlet Specific Heats Ratio Cp / Cv		1.4	1.4	1.4	---				
	17	Inlet Compressibility Factor		1	1	1	---				
	18	Inlet Viscosity		0.018	0.018	0.018	mPa.s				
	19	Critical Pressure		33			bar-g				
	20	Mass Vaporized	Solids %								
	21	Flow Rate		40	60	135	Nm³/h				
	22	Inlet Pressure		1.063	1.063	1.063	bar-g				
	23	Pressure Drop		0.05	0.049	0.048	bar				
	24	Inlet Temperature		48	48	48	°C				
	25	Max Shut-off Differential Pressure		3.5			bar				
	26	Leakage Class		ANSI II							
	27	Power Failure Position	Air Failure Position	FO		FO					
	28										
	CALCULATION DATA	29	Flow Coefficient Cv		---	5.62	8.52	19.4			
		30	Sound Pressure Level		dBA	26.2	25.8	25.5			
		31	Vendor Flow Coefficient Cv		---						
SELECTED VALVE	32	Type	Butterfly	MATERIAL	58	Body / Bonnet	Jacket	A216WCB	NA		
	33	Cv	Rangeability		400	59	Plug	Seat	10-316	10-316	
	34	Temp. Max	D.P. Max		305°C	15 bar	60	Plug Guides	Stem	NA	Stainless St
	35	Leakage Class	ANSI III		61	Yoke / Housing	Packing	Carbon Steel	Graphite		
BODY	36	Sound Pressure Level	<85 dBA		62	Bellows	NA				
	37	End Connection: Type	Double Flanged		63	Type	Model	E/P Smart	Note 5		
	38	Roughness	125-250 AARH		64	Input Signal Range		4-20 mA (HART)			
	39	Size	4"		65	Action	Direct				
	40	Rating	150#		66	PNEUMATIC	Material	Aluminium			
	41	Facing	RF		67	CONNECTION	Size	1/4"			
	42	Flow Action To	-		68	Mechanical Protection		IP65			
	43	Bonnet Type	Lubricat.	Standard	NA	69	Electrical Connection		ISO M20X1.5		
	44	Jacket & Connection	NA		70	Grounding Connection		Internal & External			
	45	Bellow Seal Required	NA		71	Filter Regulat. & Gauge		Required			
TRIM	46	Fire Safe Required	Yes		72	Material	Model	SS316	Note 3.37		
	47	ISO 15848-1 Required	Yes		LIMIT SWITCH	Tag Number					
	48	Port No.	Full / Red.	Single		Full	74	Quantity	Model		
	49	Plug Type	Character.	NA	Mod. Parabo	SOLENOID VALVE	Tag Number				
50	Sealing Seat / Plug	Metallic		76	Quantity		Model				
51	Balanced	Plug Guide	NA	NA	OPTIONS	Tag Number					
52						78	Booster	Air Lock			
ACTUATOR	53	Type	Model	Diaphragm	DYNACTAIR	PURCHASE	79 MR No.				
	54	Action	Handwh. Loc.	Direct	NA		80 PO No.				
	55	Size	Spring Range				81 Manufacturer				
	56	Travel	Travel Lock		NA		82 Model				
	57						83 Supplier				

Notes: See notes

				JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)				  			
				INSTRUMENT SPECIFICATION Control Valve				Owner Document Number			
1	SV8	12-10-2017	Issued for Purchase								
0	RC2	11-09-2015	Issued for Approval					Sheet: 85 of 280			
Nr.	By	Date	Revision	Code: 651	Doc. No.:	3863-KK-SE-8000104				Rev.:	1

1. Max Purging Condition:-

EMPTYING / DRAINAGE / PURGE

S1:

a) Fluid: Medium Pressure Nitrogen . Maximum Operating Conditions: 8.0 barg / Amb

CLEANING

B3:

a) Low Pressure Steam . Maximum Operating Conditions: 6.0 barg / 170°C; FV / 100°C

b) Fluid: Plant Air . Maximum Operating Conditions: 8.5 barg / Amb

2. Normal flow range is 60 - 130 nm³/hr; Valve shall be also sized for both upper & lower normal flow range with respect to other normal operating conditions as mentioned in the datasheet.

3. Deleted.

4. Density: 1.25 kg/Nm³

5. Model no. for Positioner : ECKARDT FOXBORO SRD991-BHNS7ZZNR-V01.

6. KV: @min : 6, @nor: 9, @max : 21

				INSTRUMENT SPECIFICATION Control Valve	   
1	SV8	12-10-2017	Issued for Purchase		
0	RC2	11-09-2015	Issued for Approval		
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8000104
				Sheet 86 of 280	
				Rev.: 1	

GENERAL	1	Tag Number	P&ID No.	80-PV -420218	J-80-PID-4202-0						
	2	Service		ORG VAPOR FR R-4201 TO J-4504A/B							
	3	Allowable Sound Pressure Level (dBA)		< 85 dB(A)							
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 bar-g	7 bar-g	10.5 bar-g					
	5	Line: Number (In)	Size (In)	Schedule (In)	3"-POV-42046A-4DAYA-H	3	in	10S			
	6	Line: Number (Out)	Size (Out)	Schedule (Out)							
	7	Line Class	Pipe Material	4DAY	Stainless Steel 304 L						
	8										
DESIGN	9	Pressure Min / Max	Temperature Min / Max	15 bar-g		305 °C					
HAZARDOUS AREA	10	Classification		Zone 2, Gr. IIA & IIB, T3							
	11	Execution	Certification	EEx-ia		IEC/ATEX					
PROCESS CONDITIONS	12	Fluid	Fluid State	Organic Vapour		Gas/Vapor					
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	14	Inlet Density		1.3	1.3	1.3	kg/m³				
	15	Molecular Mass				55	---				
	16	Inlet Specific Heats Ratio Cp / Cv					---				
	17	Inlet Compressibility Factor					---				
	18	Inlet Viscosity		0.009	0.009	0.009	mPa.s				
	19	Critical Pressure		bar-g							
	20	Mass Vaporized	Solids %								
	21	Flow Rate		6	37	40	kg/h				
	22	Inlet Pressure					bar-g				
	23	Pressure Drop					bar				
	24	Inlet Temperature		100	100	100	°C				
	25	Max Shut-off Differential Pressure		16	bar						
	26	Leakage Class		ANSI III							
	27	Power Failure Position	Air Failure Position	FO		FO					
	28										
	CALCULATION DATA	29	Flow Coefficient Cv		---						
		30	Sound Pressure Level		dBA						
		31	Vendor Flow Coefficient Cv		---						
SELECTED VALVE	32	Type	Butterfly	MATERIAL	58	Body / Bonnet	Jacket	A351 CF8M	NA		
	33	Cv	Rangeability		80	59	Plug	Seat	SS316	SS316	
	34	Temp. Max	D.P. Max		305°C	15 bar	60	Plug Guides	Stem	NA	Stainless St
	35	Leakage Class			ANSI III	61	Yoke / Housing	Packing	Carbon Steel	Graphite	
BODY	36	Sound Pressure Level		POSITIONER	62	Bellows		NA			
	37	End Connection: Type	Double Flanged		63	Type	Model	E/P Smart	Note 5		
	38	Roughness	125-250 AARH		64	Input Signal Range		4-20 mA (HART)			
	39	Size	2"		65	Action		Direct			
	40	Rating	300#		66	PNEUMATIC CONNECTION	Material	Aluminium			
	41	Facing	RF		67	CONNECTION	Size	1/4"			
	42	Flow Action To	-		68	Mechanical Protection		IP65			
	43	Bonnet Type	Lubricat.		Standard	NA	69	Electrical Connection		ISO M20X1.5	
	44	Jacket & Connection			NA	70	Grounding Connection		Internal & External		
	45	Bellow Seal Required			NA	AIR SET	71	Filter Regulat. & Gauge		Required	
46	Fire Safe Required	Yes	72	Material	Model		SS316	Note 3.37			
TRIM	47	ISO 15848-1 Required	Yes	LIMIT SWITCH	73	Tag Number					
	48	Port No.	Full / Red.		Single	Full	74	Quantity	Model		
	49	Plug Type	Character.	NA	Mod. Parabo	SOLENOID VALVE	75	Tag Number			
	50	Sealing Seat / Plug		Metallic	76		Quantity	Model			
	51	Balanced	Plug Guide	NA	NA		77				
ACTUATOR	52			OPTIONS	78	Booster	Air Lock				
	53	Type	Model		Diaphragm	DYNACTAIR	79	MR No.			
	54	Action	Handwh. Loc.		Direct	NA	80	PO No.			
	55	Size	Spring Range				81	Manufacturer			
	56	Travel	Travel Lock			NA	82	Model			
	57						83	Supplier			

Notes: See notes

				JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)		  	
				INSTRUMENT SPECIFICATION Control Valve		Owner Document Number	
1	SV8	12-10-2017	Issued for Purchase				
0	RC2	11-09-2015	Issued for Approval				
Nr.	By	Date	Revision	Code:	651	Doc. No.:	3863-KK-SE-8000104
						Sheet: 87	of 280
						Rev.:	1

1. Max Purging Condition:-
EMPTYING / DRAINAGE / PURGE
S1:
a) Fluid: Medium Pressure Nitrogen . Maximum Operating Conditions: 8.0 barg / Amb
CLEANING
B3:
a) Low Pressure Steam . Maximum Operating Conditions: 6.0 barg / 170°C; FV / 100°C
b) Fluid: Plant Air . Maximum Operating Conditions: 8.5 barg / Amb
2. DN 50 Valve.
3. Valve Pressure Drop At Open Position: Standard
4. Alternate design condition: Full Vacuum @ 305 °C
5. Positioner Model No.ECKARDT FOXBORO SRD991-BHNS7ZZZNR-V01

				INSTRUMENT SPECIFICATION Control Valve	   	
1	SV8	12-10-2017	Issued for Purchase		Sheet 88	of 280
0	RC2	11-09-2015	Issued for Approval			
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8000104	Rev.: 1

GENERAL	1	Tag Number	P&ID No.	80-PV -480123		J-80-PID-4801-0		
	2	Service		80-B-4805 BYPASS				
	3	Allowable Sound Pressure Level (dBA)		< 85 dB(A)				
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 bar-g	7 bar-g		10.5 bar-g	
	5	Line: Number (In)	Size (In)	Schedule (In)	4"-OV2-48043A-2AAYA-N		4 in 40	
	6	Line: Number (Out)	Size (Out)	Schedule (Out)				
	7	Line Class	Pipe Material	2AAY		Carbon Steel		
	8							
DESIGN	9	Pressure Min / Max	Temperature Min / Max	-0.2 3.5 bar-g		120 120 °C		
HAZARDOUS AREA	10	Classification		Zone 2, Gr. IIA & IIB, T3				
	11	Execution	Certification	EEx-ia		IEC/ATEX		
	12	Fluid	Fluid State	Organic Vents		Gas/Vapor		
PROCESS CONDITIONS	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units	
	14	Inlet Density					kg/m³	
	15	Molecular Mass				28	---	
	16	Inlet Specific Heats Ratio Cp / Cv	1.4	1.4	1.4		---	
	17	Inlet Compressibility Factor	1	1	1		---	
	18	Inlet Viscosity	0.018	0.018	0.018		mPa.s	
	19	Critical Pressure	33				bar-g	
	20	Mass Vaporized	Solids %					
	21	Flow Rate	40	60	135		Nm³/h	
	22	Inlet Pressure	1.063	1.063	1.063		bar-g	
	23	Pressure Drop	0.05	0.049	0.048		bar	
	24	Inlet Temperature	48	48	48		°C	
	25	Max Shut-off Differential Pressure	3.5				bar	
	26	Leakage Class	ANSI II					
	27	Power Failure Position	Air Failure Position	FO		FO		
	28							
	CALCULATION DATA	29	Flow Coefficient Cv		---	5.62	8.52	19.4
		30	Sound Pressure Level		dBA	26.2	25.8	25.5
31		Vendor Flow Coefficient Cv		---				
SELECTED VALVE	32	Type	Butterfly					
	33	Cv	Rangeability	400				
	34	Temp. Max	D.P. Max	305°C	15 bar			
	35	Leakage Class	ANSI III					
BODY	36	Sound Pressure Level	<85 dBA					
	37	End Connection: Type	Double Flanged					
	38	Roughness	125-250 AARH					
	39	Size	4"					
	40	Rating	150#					
	41	Facing	RF					
	42	Flow Action To	-					
	43	Bonnet Type	Lubricat.	Standard	NA			
	44	Jacket & Connection	NA					
	45	Bellow Seal Required	NA					
TRIM	46	Fire Safe Required	Yes					
	47	ISO 15848-1 Required	Yes					
	48	Port No.	Full / Red.	Single	Full			
ACTUATOR	49	Plug Type	Character.	NA	Mod. Parabo			
	50	Sealing Seat / Plug	Metallic					
	51	Balanced	Plug Guide	NA	NA			
	52							
MATERIAL	58	Body / Bonnet	Jacket	A216WCB	NA			
	59	Plug	Seat	10-316	10-316			
	60	Plug Guides	Stem	NA	Stainless St			
	61	Yoke / Housing	Packing	Carbon Steel	Graphite			
	62	Bellows	NA					
POSITIONER	63	Type	Model	E/P Smart	Note 5			
	64	Input Signal Range	4-20 mA (HART)					
	65	Action	Direct					
	66	PNEUMATIC CONNECTION	Material	Aluminium				
	67	Size	1/4"					
AIR SET	68	Mechanical Protection	IP65					
	69	Electrical Connection	ISO M20X1.5					
	70	Grounding Connection	Internal & External					
	71	Filter Regulat. & Gauge	Required					
	72	Material	Model	SS316	Note 3.37			
LIMIT SWITCH	73	Tag Number						
	74	Quantity	Model					
	75	Tag Number						
SOLENOID VALVE	76	Quantity	Model					
	77							
	78	Booster	Air Lock					
PURCHASE	79	MR No.						
	80	PO No.						
	81	Manufacturer						
	82	Model						
	83	Supplier						
Notes: See notes								
JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)				  				
				INSTRUMENT SPECIFICATION Control Valve		Owner Document Number		
1	SV8	12-10-2017	Issued for Purchase			Sheet: 89 of 280		
0	RC2	11-09-2015	Issued for Approval					
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8000104	Rev.: 1		

1. Max Purging Condition:-

EMPTYING / DRAINAGE / PURGE

S1:

a) Fluid: Medium Pressure Nitrogen . Maximum Operating Conditions: 8.0 barg / Amb

CLEANING

B3:

a) Low Pressure Steam . Maximum Operating Conditions: 6.0 barg / 170°C; FV / 100°C

b) Fluid: Plant Air . Maximum Operating Conditions: 8.5 barg / Amb

2. Normal flow range is 60 - 130 nm³/hr; Valve shall be also sized for both upper & lower normal flow range with respect to other normal operating conditions as mentioned in the datasheet.

3. Deleted.

4. Density: 1.25 kg/Nm³

5. Positioner Model No.ECKARDT FOXBORO SRD991-BHNS7ZZZNR-V01

6. KV: @min : 6, @nor: 9, @max : 21

				INSTRUMENT SPECIFICATION Control Valve	   	
1	SV8	12-10-2017	Issued for Purchase		Sheet 90	of 280
0	RC2	11-09-2015	Issued for Approval			
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8000104	Rev.: 1

GENERAL	1	Tag Number	P&ID No.	80-PV -520218	J-80-PID-5202-0						
	2	Service			ORG VAPOR FR R-5201 TO J-5504A/B						
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)						
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g	7 bar-g		10.5 bar-g			
	5	Line: Number (In)	Size (In)	Schedule (In)	3"-POV-52046A-4DAYA-H		3 in	10S			
	6	Line: Number (Out)	Size (Out)	Schedule (Out)							
	7	Line Class	Pipe Material	4DAY		Stainless Steel 304 L					
	8										
DESIGN	9	Pressure Min / Max	Temperature Min / Max	15 bar-g		305 °C					
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3						
	11	Execution	Certification	EEx-ia		IEC/ATEX					
PROCESS CONDITIONS	12	Fluid	Fluid State	Organic Vapour		Gas/Vapor					
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	14	Inlet Density		1.3	1.3	1.3	kg/m³				
	15	Molecular Mass				55	---				
	16	Inlet Specific Heats Ratio Cp / Cv					---				
	17	Inlet Compressibility Factor					---				
	18	Inlet Viscosity		0.009	0.009	0.009	mPa.s				
	19	Critical Pressure		bar-g							
	20	Mass Vaporized	Solids %								
	21	Flow Rate		6	37	40	kg/h				
	22	Inlet Pressure					bar-g				
	23	Pressure Drop					bar				
	24	Inlet Temperature		100	100	100	°C				
	25	Max Shut-off Differential Pressure		16	bar						
	26	Leakage Class		ANSI III							
	27	Power Failure Position	Air Failure Position	FO		FO					
	28										
	CALCULATION DATA	29	Flow Coefficient Cv		---						
		30	Sound Pressure Level		dBA						
		31	Vendor Flow Coefficient Cv		---						
SELECTED VALVE	32	Type	Butterfly		MATERIAL	58	Body / Bonnet	Jacket	A351 CF8M	NA	
	33	Cv	Rangeability	80		59	Plug	Seat	SS316	SS316	
	34	Temp. Max	D.P. Max	305°C		15 bar	60	Plug Guides	Stem	NA	Stainless St
	35	Leakage Class		ANSI III		61	Yoke / Housing	Packing	Carbon Steel	Graphite	
BODY	36	Sound Pressure Level			62	Bellows		NA			
	37	End Connection: Type	Double Flanged		63	Type	Model	E/P Smart	Note 5		
	38	Roughness	125-250 AARH		64	Input Signal Range		4-20 mA (HART)			
	39	Size	2"		65	Action		Direct			
	40	Rating	300#		66	PNEUMATIC	Material	Aluminium			
	41	Facing	RF		67	CONNECTION	Size	1/4"			
	42	Flow Action To	-		68	Mechanical Protection		IP65			
	43	Bonnet Type	Lubricat.	Standard	NA	69	Electrical Connection		ISO M20X1.5		
	44	Jacket & Connection		NA		70	Grounding Connection		Internal & External		
	45	Bellow Seal Required		NA		71	Filter Regulat. & Gauge		Required		
TRIM	46	Fire Safe Required	Yes		72	Material	Model	SS316	Note 3.37		
	47	ISO 15848-1 Required	Yes		LIMIT SWITCH	73	Tag Number				
	48	Port No.	Full / Red.	Single		Full	74	Quantity	Model		
	49	Plug Type	Character.	NA	Mod. Parabo	SOLENOID VALVE	75	Tag Number			
50	Sealing Seat / Plug		Metallic		76		Quantity	Model			
51	Balanced	Plug Guide	NA	NA	OPTIONS	77					
52						78	Booster	Air Lock			
ACTUATOR	53	Type	Model	Diaphragm	DYNACTAIR	PURCHASE	79	MR No.			
	54	Action	Handwh. Loc.	Direct	NA		80	PO No.			
	55	Size	Spring Range				81	Manufacturer			
	56	Travel	Travel Lock		NA		82	Model			
	57						83	Supplier			

Notes: See notes

				JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)		  	
				INSTRUMENT SPECIFICATION Control Valve		Owner Document Number	
1	SV8	12-10-2017	Issued for Purchase				
0	RC2	11-09-2015	Issued for Approval				
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8000104	Sheet: 91	of 280
				Rev.: 1			

1. Max Purging Condition:-
EMPTYING / DRAINAGE / PURGE
S1:
a) Fluid: Medium Pressure Nitrogen . Maximum Operating Conditions: 8.0 barg / Amb
CLEANING
B3:
a) Low Pressure Steam . Maximum Operating Conditions: 6.0 barg / 170°C; FV / 100°C
b) Fluid: Plant Air . Maximum Operating Conditions: 8.5 barg / Amb
2. DN 50 Valve.
3. Valve Pressure Drop at Open Position: Standard
4. Alternate design condition: Full Vacuum @ 305 °C
5. Positioner Model No.ECKARDT FOXBORO SRD991-BHNS7ZZZNR-V01

				INSTRUMENT SPECIFICATION Control Valve	   	
1	SV8	12-10-2017	Issued for Purchase		Sheet 92 of 280	
0	RC2	11-09-2015	Issued for Approval			
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8000104	Rev.: 1

GENERAL	1	Tag Number	P&ID No.	80-PV -580123		J-80-PID-5801-0					
	2	Service		80-B-5805 BYPASS							
	3	Allowable Sound Pressure Level (dBA)		< 85 dB(A)							
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 bar-g	7 bar-g		10.5 bar-g				
	5	Line: Number (In)	Size (In)	Schedule (In)	4"-OV2-58043A-2AAYA-N		4 in 40				
	6	Line: Number (Out)	Size (Out)	Schedule (Out)							
	7	Line Class	Pipe Material	2AAY		Carbon Steel					
	8										
DESIGN	9	Pressure Min / Max	Temperature Min / Max	-0.2 3.5 bar-g		120 120 °C					
HAZARDOUS AREA	10	Classification		Zone 2, Gr. IIA & IIB, T3							
	11	Execution	Certification	EEx-ia		IEC/ATEX					
PROCESS CONDITIONS	12	Fluid	Fluid State	Organic Vents		Gas/Vapor					
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	14	Inlet Density					kg/m³				
	15	Molecular Mass				28	---				
	16	Inlet Specific Heats Ratio Cp / Cv		1.4	1.4	1.4	---				
	17	Inlet Compressibility Factor		1	1	1	---				
	18	Inlet Viscosity		0.018	0.018	0.018	mPa.s				
	19	Critical Pressure		33			bar-g				
	20	Mass Vaporized	Solids %								
	21	Flow Rate		40	60	135	Nm³/h				
	22	Inlet Pressure		1.063	1.063	1.063	bar-g				
	23	Pressure Drop		0.05	0.049	0.048	bar				
	24	Inlet Temperature		48	48	48	°C				
	25	Max Shut-off Differential Pressure		3.5			bar				
	26	Leakage Class		ANSI II							
	27	Power Failure Position	Air Failure Position	FO		FO					
	CALCULATION DATA	29	Flow Coefficient Cv		---	5.62	8.52	19.4			
		30	Sound Pressure Level		dBA	26.2	25.8	25.5			
31		Vendor Flow Coefficient Cv		---							
SELECTED VALVE	32	Type	Butterfly	MATERIAL	58	Body / Bonnet	Jacket	A216WCB	NA		
	33	Cv	Rangeability		400	59	Plug	Seat	10-316	10-316	
	34	Temp. Max	D.P. Max		305°C	15 bar	60	Plug Guides	Stem	NA	Stainless St
	35	Leakage Class			ANSI III	61	Yoke / Housing	Packing	Carbon Steel	Graphite	
BODY	36	Sound Pressure Level		<85 dBA	62	Bellows		NA			
	37	End Connection: Type		Double Flanged	63	Type	Model	E/P Smart	Note 5		
	38	Roughness		125-250 AARH	64	Input Signal Range		4-20 mA (HART)			
	39	Size		4"	65	Action		Direct			
	40	Rating		150#	66	PNEUMATIC CONNECTION	Material	Aluminium			
	41	Facing		RF	67	CONNECTION	Size	1/4"			
	42	Flow Action To		-	68	Mechanical Protection		IP65			
	43	Bonnet Type	Lubricat.	Standard	NA	69	Electrical Connection		ISO M20X1.5		
	44	Jacket & Connection		NA	70	Grounding Connection		Internal & External			
	45	Bellow Seal Required		NA	71	Filter Regulat. & Gauge		Required			
TRIM	46	Fire Safe Required		Yes	72	Material	Model	SS316	Note 3.37		
	47	ISO 15848-1 Required		Yes	LIMIT SWITCH	73	Tag Number				
	48	Port No.	Full / Red.	Single		Full	74	Quantity	Model		
	49	Plug Type	Character.	NA	Mod. Parabo	SOLENOID VALVE	75	Tag Number			
50	Sealing Seat / Plug		Metallic	76	Quantity		Model				
ACTUATOR	51	Balanced	Plug Guide	NA	NA	OPTIONS	77				
	52						78	Booster	Air Lock		
	53	Type	Model	Diaphragm	DYNACTAIR		79	MR No.			
	54	Action	Handwh. Loc.	Direct	NA		80	PO No.			
	55	Size	Spring Range				81	Manufacturer			
56	Travel	Travel Lock		NA	82	Model					
57					83	Supplier					

Notes: See notes

				JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)		  	
				INSTRUMENT SPECIFICATION Control Valve		Owner Document Number	
1	SV8	12-10-2017	Issued for Purchase				
0	RC2	11-09-2015	Issued for Approval				
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8000104	Sheet: 93	of 280
						Rev.: 1	

1. Max Purging Condition:-

EMPTYING / DRAINAGE / PURGE

S1:

a) Fluid: Medium Pressure Nitrogen . Maximum Operating Conditions: 8.0 barg / Amb

CLEANING

B3:

a) Low Pressure Steam . Maximum Operating Conditions: 6.0 barg / 170°C; FV / 100°C

b) Fluid: Plant Air . Maximum Operating Conditions: 8.5 barg / Amb

2. Normal flow range is 60 - 130 nm³/hr; Valve shall be also sized for both upper & lower normal flow range with respect to other normal operating conditions as mentioned in the datasheet.

3. Deleted.

4. Density: 1.25 kg/Nm³

5. Positioner Model No.ECKARDT FOXBORO SRD991-BHNS7ZZZNR-V01

6. KV: @min : 6, @nor: 9, @max : 21

				INSTRUMENT SPECIFICATION Control Valve	   	
1	SV8	12-10-2017	Issued for Purchase		Sheet 94 of 280	
0	RC2	11-09-2015	Issued for Approval			
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8000104	Rev.: 1

GENERAL	1	Tag Number	P&ID No.	85-PV -121715B		J-85-PID-1217-0		
	2	Service			LN TO 85-D-1209			
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)			
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g		7 bar-g	
	5	Line: Number (In)	Size (In)	Schedule (In)	2" -FWG-12250A-2AAYD-N	3 in	80	
	6	Line: Number (Out)	Size (Out)	Schedule (Out)				
	7	Line Class	Pipe Material	2AAY		Carbon Steel		
	8							
DESIGN	9	Pressure Min / Max	Temperature Min / Max	3.5 bar-g		165 °C		
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3			
	11	Execution	Certification	EEx-ia		IEC/ATEX		
PROCESS CONDITIONS	12	Fluid	Fluid State	Flare vent gas		Gas/Vapor		
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units	
	14	Inlet Density		1.68	1.68	1.68	kg/m³	
	15	Molecular Mass				28	---	
	16	Inlet Specific Heats Ratio Cp / Cv		1.407	1.407	1.407	---	
	17	Inlet Compressibility Factor		1	1	1	---	
	18	Inlet Viscosity		0.018	0.018	0.018	mPa.s	
	19	Critical Pressure		32.9		bar-g		
	20	Mass Vaporized	Solids %					
	21	Flow Rate		50	120	310	kg/h	
	22	Inlet Pressure		0.5	0.5	0.42	bar-g	
	23	Pressure Drop		0.3	0.3	0.02	bar	
	24	Inlet Temperature		30	30	30	°C	
	25	Max Shut-off Differential Pressure		3.5		bar		
	26	Leakage Class		ANSI IV (standard)				
	27	Power Failure Position	Air Failure Position	FC		FC		
	28							
	CALCULATION DATA	29	Flow Coefficient Cv		---	2.89	6.92	62.4
		30	Sound Pressure Level		dBA	56.7	56.8	6.89
		31	Vendor Flow Coefficient Cv		---	(*)	(*)	(*)
SELECTED VALVE	32	Type	Globe					
	33	Cv	Rangeability	(*)	(*)			
	34	Temp. Max	D.P. Max	(*)	(*)			
	35	Leakage Class		(*)				
BODY	36	Sound Pressure Level		(*)				
	37	End Connection: Type	Double Flanged					
	38	Roughness	125-250 AARH					
	39	Size	3" 3"					
	40	Rating	150#					
	41	Facing	RF					
	42	Flow Action To	(*)					
	43	Bonnet Type	Lubricat.	Standard	(*)			
	44	Jacket & Connection		NA				
	45	Bellow Seal Required		No				
TRIM	46	Fire Safe Required		Yes				
	47	ISO 15848-1 Required		Yes				
	48	Port No.	Full / Red.	Single (*)	(*)			
ACTUATOR	49	Plug Type	Character.	(*)	Equal %			
	50	Sealing Seat / Plug		Metallic				
	51	Balanced	Plug Guide	(*)	(*)			
	52							
MATERIAL	58	Body / Bonnet	Jacket	A216WCB	NA			
	59	Plug	Seat	8-F6 & HF	8-F6 & HF			
	60	Plug Guides	Stem	(*)	(*)			
	61	Yoke / Housing	Packing	(*)	Graphite			
	62	Bel lows						
	63	Type	Model	E/P Smart	(*)			
	64	Input Signal Range	4-20 mA (HART)					
	65	Action	Direct					
	66	PNEUMATIC CONNECTION	Material	SS316				
	67	Size	1/4"					
POSITIONER	68	Mechanical Protection	IP65					
	69	Electrical Connection	ISO M20X1.5					
	70	Grounding Connection	Internal & External					
	71	Filter Regulat. & Gauge	Required					
AIR SET	72	Material	Model	SS316	(*)			
	73	Tag Number						
LIMIT SWITCH	74	Quantity	Model					
	75	Tag Number						
SOLENOID VALVE	76	Quantity	Model					
	77							
OPTIONS	78	Booster	Air Lock	(*)	(*)			
	79	MR No.						
	80	PO No.						
	81	Manufacturer	(*)					
	82	Model	(*)					
	83	Supplier						
Notes: See notes								
		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)						
						Owner Document Number		
						Sheet: 265 of 370		
0	RC2	11/09/2015	Issued for Approval					
Nr.	By	Date	Revision		Code: 651	Doc. No.: 3863-KK-SE-8500104	Rev.: 0	

Tag Number : 85-PV -121715B

1. No alteration of fluid
2. Max Purging Condition: 6 barg @ 170°C
3. Alternative design conditions for purging operation: FV 100 °C

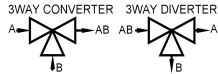
				INSTRUMENT SPECIFICATION Control Valve	   		
0	RC2	11/09/2015	Issued for Approval				
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8500104	Sheet 266 of 370	Rev.: 0

GENERAL	1	Tag Number	P&ID No.	88-EVX-900118	J-808588-UDD-0001		
	2	Service		Fule Gas from OSBL			
	3	Allowable Sound Pressure Level (dBA)		< 85 dB(A)			
	4	Air Supply Pressure: Min / Nor / Max / Design					
	5	5 Fire-Safe Execution	Antistatic Device	Firesafe Design	Yes		
	6	Line: Number (In)	Size (In)	Schedule (In)	4"-FG-10008A-2AAFA-N	4" 40	
	7	Line: Number (Out)	Size (Out)	Schedule (Out)	4"-FG-10008A-2AAFA-N	4" 40	
	8	Line Class	Pipe Material	2AAF	Carbon Steel		
	9	TA-Luft Certification					
DESIGN	10	Pressure Min / Max	Temperature Min / Max	17	barg	85	°C
HAZARDOUS AREA	11	Classification		Zone 2, Gr. IIA & IIB, T3			
	12	Execution	Certification	EEx-ia	IEC/ATEX		
PROCESS CONDITIONS	13	Fluid	Fluid State	Fule Gas	GAS		
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units
	15	Inlet Density			7		kg/m3
	16	Specific Gravity					
	17						
	18						
	19	Inlet Viscosity					cP
	20	Solids %			nil		
	21	Flow Rate			1,650		kg/h
	22	Inlet Pressure			8~12		barg
	23	Pressure Drop			MIN		
	24	Inlet Temperature			5-AMB		°C
	25	Max Shut-off Differential Pressure (bar)			17.0		barg
	26	Leakage Class					
	27	Power Failure Position	Air Failure Position	FC			
	28	Travel Time					
	CALCULATION DATA	29	Flow Coefficient Cv				---
30		Sound Pressure Level				dBA	
SELECTED VALVE	31	Type	Ball				
	32	Cv	Leakage Class	(*)	(V) Note 2		
	33	Temp. Max	D.P. Max	(*)	(*)		
	34	Sound Pressure Level		(*)			
	35						
BODY	36	End Connection: Type	Flanged				
	37	Roughness	125-250 AARH				
	38	Size	4"				
	39	Rating	150#				
	40	Facing	RF				
	41	Flow Action To	NA				
	42	Bonnet Type	Lubricat.	STD (*)	(*)		
	43	Jacket and Connection	NA				
TRIM	44	Port	Full Bore				
	45	Plug Type	Ball				
	46	Sealing Seat / Plug	Soft seat				
ACTUATOR	47	Plug Guide	Trunnion Ball				
	48	Type	Model	Piston	(*)		
	49	Piston Acting	Single Acting Pneumatic				
	50	Open / Close Time	(*)				
	51	Handwh. Loc.	Required/TBA				
	52	Size	Spring Range	(*)	(*)		
	53	Travel	Travel Lock	(*)	NA		
	54	PNEUMATIC CONNECTION	Material	SS 316			
	55	CONNECTION	Size	1/4" (*)			
	56	Execution					
	57	Model	(*)				
MATERIAL	58	Body / Bonnet	Jacket	A216 WCB			
	59	Plug	Seat	SS 316		SS 316	
	60	Sealing	Packing	PTFE		flexible Graphite	
	61	Plug Guides		SS316			
	62						
	AIR SET	63	Filter Regulat. & Gauge		Required		
		64	Material	Model	SS316	(*)	
		65	Tag Number		88-EZSH/LX-900118		
		66	Quantity	Model	2	(*)	
	LIMIT SWITCH (Note 1)	67	Tag Number		88-EYX-900118		
		68	Quantity	Model	1	(*)	
		69	Reset		Auto Reset		
SOLENOID VALVE		70	Tag Number		NA		
	71	Model		NA			
	72						
PNEUMATIC DISTRIBUTOR	73	Partial Stroke Device					
	74	Quick Exhaust					
	75	Air Lock					
	76	Actuator fire Proofing					
	77	Thermal Fuse					
	78	SIL Rating					
	79						
OPTIONS	80	MR No.					
	81	PO No.					
	82	Manufacturer	(*)				
	83	Model	(*)				
	84	Supplier	(*)				
	PURCHASE						

Notes:

1- Limit switches shall be namur type.

2- Tight Shutoff characteristic.



	JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)	  
	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES	OWNER DOCUMENT NUMBER
Nr.	By	Date
	Revision	

GENERAL	1	Tag Number	P&ID No.	80-HV-990601	J-80-PID-6914-3 (2/2)						
	2	Service	80-TK-6950A, FOAM SYSTEM ACN								
	3	Allowable Sound Pressure Level (dBA)	< 85 dB(A)								
	4	Air Supply Pressure: Min / Nor / Max / Design	5.5 bar-g	7 bar-g	10.5 bar-g						
	5	Fire-Safe Execution	Antistatic Device	NA	Required						
	6	Line: Number (In)	Size (In)	Schedule (In)	2"-FW-69138A-2PBNB-N	2"					
	7	Line: Number (Out)	Size (Out)	Schedule (Out)	3"-FW-69139A-2PBNB-N	3"					
	8	Line Class	Pipe Material	2PBN	ASTM A 53 GR. B Galvanized	ASTM A 106 GR. B Galvanized					
	9	TA-Luft Certification	NA								
DESIGN	10	Pressure Min / Max	Temperature Min / Max	19.0	barg	85	°C				
HAZARDOUS AREA	11	Classification	Zone 2, Temperature Class T4, Gas Group IIC								
	12	Execution	Certification	EEx (ia)			IEC/ATEX				
PROCESS CONDITIONS	13	Fluid	Fluid State	AR-AFFFFF-Foam Solution			LIQUID				
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density	5		998		kg/m3				
	16	Specific Gravity			1.00		---				
	17						---				
	18						---				
	19	Inlet Viscosity			0.3		Cp				
	20	Solids %			nil						
	21	Flow Rate		16410	30000	30000	kg/h				
	22	Inlet Pressure			5.02		barg				
	23	Pressure Drop			0.15						
	24	Inlet Temperature		5	30	48	°C				
	25	Max Shut-off Differential Pressure (bar)	6		19.0		barg				
	26	Leakage Class		ANSI IV (standard)							
	27	Power Failure Position	Air Failure Position	Last		LAST					
	28	Travel Time	less than 10 sec								
	CALCULATION DATA	29	Flow Coefficient Cv				---				
30		Sound Pressure Level		85		dBA					
SELECTED VALVE	31	Type	Butterfly	MATERIAL	58	Body / Bonnet	Jacket	A216 WCB	NA		
	32	Cv	Leakage Class		59	Plug	Seat	Note 3	Note 3		
	33	Temp. Max	D.P. Max		85°C	19 barg	60	Sealing	Packing	Viton	Flex Graphite
	34	Sound Pressure Level	<85dBA		61	Plug Guides	SS316				
	35				62						
BODY	36	End Connection: Type	Lug	AIR SET	63	Filter Regulat. & Gauge	Required				
	37	Roughness	125-250 AARH		64	Material	Model	SS316	(*)		
	38	Size	2"	LIMIT SWITCH	65	Tag Number	80-HZSH/L-990601				
	39	Rating	150#		66	Quantity	Model	2	(*)		
	40	Facing	RF	SOLENOID VALVE	67	Tag Number	80-HY-990601				
41	Flow Action To	NA	68		Quantity	Model	1	(*)			
42	Bonnet Type	Lubricat.	NA		69	Reset	Auto (norm de-energised)				
TRIM	43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	70	Tag Number	NA				
	44	Port	Full Bore		71	Model	NA				
	45	Plug Type	butterfly plate		72						
	46	Sealing Seat / Plug	Metallic		73	Partial Stroke Device					
ACTUATOR	47	Plug Guide	NA	OPTIONS	74	Quick Exhaust					
	48	Type	Model		Piston	75	Air Lock				
	49	Piston Acting	Single Acting Pneumatic		76	Actuator fire Proofing					
	50	Open / Close Time	10 Sec		77	Thermal Fuse					
	51	Handwh. Loc.	Required		78	SIL Rating					
	52	Size	Spring Range	125S	(*)	79					
	53	Travel	Travel Lock	0- 90°	NA	PURCHASE	80	MR No.			
	54	PNEUMATIC CONNECTION	Material	SS 316	81		PO No.	Later			
	55	CONNECTION	Size	1/4" (*)	82		Manufacturer	Later			
	56	Execution			83		Model	Later			
57	Model	(*)		84	Supplier		Later				
Notes: See notes											
		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			 						
6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)	OWNER DOCUMENT NUMBER Sheet: 49 of 56						
5	Y.X	5.Jun.2024	IFR								
4	Y.X	3.APR.2024	IFR								
3	M.Kh	13.09.2021	Issued for Purchase								
2	M.Kh	28-07-2021	Issued for Approval								
Nr.	By	Date	Revision					Rev: 6			

Tag Number: 80-HV-990601

Notes:

1. Air failure last position (i.e "if in OPEN condition, valve will stay open; if in CLOSE position, valve will stay closed"), manual operation of valves to be possible by means of gearbox + handwheel.

2. Normal Operating Conditions: Solenoid is de-energized, valve closed; When energized, valve open. Solenoid valve is equipped with a locking device (latch) that will force the solenoid to keep the ENERGIZED position even in case of POWER FAIL.

Working of latching device : when the solenoid is ENERGIZED, the latching lever will automatically lock in position, thus preventing solenoid to switch in case of power fail. Once the emergency is over, latching device will have to be manually unlocked by operators to resume standard operating condition.

3. Trim Material : Disc: A 216 WCB + EPDM Sleeve, Stem: 13% Cr,Seat: 13% Cr,Seat Insert: EPDM.



JAM ABS & RUBBERS PLANT
(BANDAR ASSALUYEH)



6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)	OWNER DOCUMENT NUMBER
5	Y.X	5.Jun.2024	IFR		
4	Y.X	3.APR.2024	IFR		
3	M.Kh	13.09.2021	Issued for Purchase		Sheet: 50 of 56
2	M.Kh	28-07-2021	Issued for Approval		
Nr.	By	Date	Revision		Rev: 6

GENERAL	1	Tag Number	P&ID No.	80-HV-990602	J-80-PID-6914-3 (2/2)						
	2	Service	80-TK-6950A, FOAM SYSTEM ACN								
	3	Allowable Sound Pressure Level (dBA)	< 85 dBA								
	4	Air Supply Pressure: Min / Nor / Max / Design	5.5 bar-g	7 bar-g	10.5 bar-g						
	5	Fire-Safe Execution	Antistatic Device	NA	Required						
	6	Line: Number (In)	Size (In)	Schedule (In)	2"-FW-69140A-2PBNB-N	2"					
	7	Line: Number (Out)	Size (Out)	Schedule (Out)	3"-FW-69141A-2PBNB-N	3"					
	8	Line Class	Pipe Material	2PBN	ASTM A 53 GR. B Galvanized	ASTM A 106 GR. B Galvanized					
	9	TA-Luft Certification	NA								
DESIGN	10	Pressure Min / Max	Temperature Min / Max	19.0	barg	85	°C				
HAZARDOUS AREA	11	Classification	Zone 2, Temperature Class T4, Gas Group IIC								
	12	Execution	Certification	EEx (ia)			IEC/ATEX				
PROCESS CONDITIONS	13	Fluid	Fluid State	AR-AFFFFF-Foam Solution			LIQUID				
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density	5		998		kg/m3				
	16	Specific Gravity			1.00		---				
	17						---				
	18						---				
	19	Inlet Viscosity			0.3		Cp				
	20	Solids %			nil						
	21	Flow Rate		8952	45000	45000	kg/h				
	22	Inlet Pressure			5.72		barg				
	23	Pressure Drop			0.15						
	24	Inlet Temperature	6	5	30	48	°C				
	25	Max Shut-off Differential Pressure (bar)			19.0		barg				
	26	Leakage Class	ANSI IV (standard)								
	27	Power Failure Position	Air Failure Position	Last		LAST					
	28	Travel Time	less than 10 sec								
CALCULATION DATA	29	Flow Coefficient Cv				---					
	30	Sound Pressure Level		85		dBA					
SELECTED VALVE	31	Type	Butterfly	MATERIAL	58	Body / Bonnet	Jacket	A216 WCB	NA		
	32	Cv	Leakage Class		ANSI IV	59	Plug	Seat	Note 3	Note 3	
	33	Temp. Max	D.P. Max		85°C	19 barg	60	Sealing	Packing	Viton	Flex Graphite
	34	Sound Pressure Level	<85dBA		61	Plug Guides	SS316				
	35				62						
BODY	36	End Connection: Type	Lug	AIR SET	63	Filter Regulat. & Gauge	Required				
	37	Roughness	125-250 AARH		64	Material	Model	SS316	(*)		
	38	Size	2"	LIMIT SWITCH	65	Tag Number	80-HZSH/L-990602				
	39	Rating	150#		66	Quantity	Model	2	(*)		
	40	Facing	RF	SOLENOID VALVE	67	Tag Number	80-HY-990602				
41	Flow Action To	NA	68		Quantity	Model	1	(*)			
42	Bonnet Type	Lubricat.	NA		69	Reset	Auto (norm de-energised)				
TRIM	43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	70	Tag Number	NA				
	44	Port	Full Bore		71	Model	NA				
	45	Plug Type	butterfly plate		72						
	46	Sealing Seat / Plug	Metallic		73	Partial Stroke Device					
ACTUATOR	47	Plug Guide	NA	OPTIONS	74	Quick Exhaust					
	48	Type	Model		Piston	75	Air Lock				
	49	Piston Acting	Single Acting Pneumatic		76	Actuator fire Proofing					
	50	Open / Close Time	10 Sec		77	Thermal Fuse					
	51	Handwh. Loc.	Required		78	SIL Rating					
	52	Size	Spring Range	125S	(*)	79					
	53	Travel	Travel Lock	0- 90°	NA	PURCHASE	80	MR No.			
	54	PNEUMATIC CONNECTION	Material	SS 316	81		PO No.	Later			
	55	CONNECTION	Size	1/4" (*)	82		Manufacturer	Later			
	56	Execution			83		Model	Later			
57	Model	(*)		84	Supplier		Later				
Notes: See notes											
   											
6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)	OWNER DOCUMENT NUMBER						
5	Y.X	5.Jun.2024	IFR								
4	Y.X	3.APR.2024	IFR								
3	M.Kh	13.09.2021	Issued for Purchase								
2	M.Kh	28-07-2021	Issued for Approval								
Nr.	By	Date	Revision		Sheet: 51 of 56						
					Rev: 6						

Tag Number: 80-HV-990602

Notes:

1. Air failure last position (i.e "if in OPEN condition, valve will stay open; if in CLOSE position, valve will stay closed"), manual operation of valves to be possible by means of gearbox + handwheel.

2. Normal Operating Conditions: Solenoid is de-energized, valve closed; When energized, valve open. Solenoid valve is equipped with a locking device (latch) that will force the solenoid to keep the ENERGIZED position even in case of POWER FAIL.

Working of latching device : when the solenoid is ENERGIZED, the latching lever will automatically lock in position, thus preventing solenoid to switch in case of power fail. Once the emergency is over, latching device will have to be manually unlocked by operators to resume standard operating condition

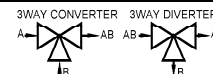
3. Trim Material : Disc: A 216 WCB + EPDM Sleeve, Stem: 13% Cr,Seat: 13% Cr,Seat Insert: EPDM.



			JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)					
6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)		OWNER DOCUMENT NUMBER		
5	Y.X	5.Jun.2024	IFR					
4	Y.X	3.APR.2024	IFR			Sheet: 52 of 56		
3	M.Kh	13.09.2021	Issued for Purchase			Rev: 6		
2	M.Kh	28-07-2021	Issued for Approval					
Nr.	By	Date	Revision					

GENERAL	1	Tag Number	P&ID No.		80-HV-990603		J-80-PID-6914-3 (2/2)						
	2	Service			80-TK-6950B, FOAM SYSTEM ACN								
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)								
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g		7 bar-g		10.5 bar-g				
	5	5 Fire-Safe Execution			Antistatic Device		NA		Required				
	6	Line: Number (In)		Size (In)	Schedule (In)	2"-FW-69142A-2PBNB-N		2"					
	7	Line: Number (Out)		Size (Out)	Schedule (Out)	3"-FW-69143A-2PBNB-N		3"					
	8	Line Class		Pipe Material		2PBN		ASTM A 53 GR. B Galvanized ASTM A 106 GR. B Galvanized					
	9	TA-Luft Certification			NA								
DESIGN	10	Pressure Min / Max		Temperature Min / Max		19.0		barg		85	°C		
HAZARDOUS AREA	11	Classification				Zone 2, Temperature Class T4, Gas Group IIC							
	12	Execution		Certification		EEx (Ia)			IEC/ATEX				
PROCESS CONDITIONS	13	Fluid		Fluid State		AR-AFFFFF-Foam Solution			LIQUID				
	14					@ Min. Flow		@ Norm. Flow		@ Max. Flow		Units	
	15	Inlet Density						998				kg/m3	
	16	Specific Gravity						1.00				---	
	17											---	
	18											---	
	19	Inlet Viscosity						0.3				Cp	
	20	Solids %						nil					
	21	Flow Rate				16410		30000		30000		kg/h	
	22	Inlet Pressure						5.43				barg	
	23	Pressure Drop						0.15					
	24	Inlet Temperature				5		30		48		°C	
	25	Max Shut-off Differential Pressure (bar)						19.0				barg	
	26	Leakage Class				ANSI IV (standard)							
	CALCULATION DATA	27	Power Failure Position		Air Failure Position		Last			LAST			
		28	Travel Time				less than 10 sec						
		29	Flow Coefficient Cv										---
SELECTED VALVE	30	Sound Pressure Level						85				dBA	
	31	Type		Butterfly		MATERIAL	58	Body / Bonnet		Jacket	A216 WCB	NA	
	32	Cv	Leakage Class		ANSI IV		59	Plug		Seat	Note 3	Note 3	
	33	Temp. Max	D.P. Max	85°C	19 barg		60	Sealing		Packing	Viton	Flex Graphite	
	34	Sound Pressure Level			<85dBA		61	Plug Guides		SS316			
	35						62						
BODY	36	End Connection: Type		Lug		AIR SET	63	Filter Regulat. & Gauge		Required			
	37	Roughness		125-250 AARH			64	Material	Model	SS316	(*)		
	38	Size		2"		LIMIT SWITCH	65	Tag Number		80-HZSH/L-990603			
	39	Rating		150#			66	Quantity	Model	2	(*)		
	40	Facing		RF		SOLENOID VALVE	67	Tag Number		80-HY-990603			
	41	Flow Action To		NA			68	Quantity	Model	1	(*)		
	42	Bonnet Type	Lubricat.		NA		69	Reset		Auto (norm de-energised)			
	TRIM	43	Jacket and Connection		NA		PNEUMATIC DISTRIBUTOR	70	Tag Number		NA		
44		Port		Full Bore		71		Model		NA			
45		Plug Type		butterfly plate		72							
46		Sealing Seat / Plug		Metallic		73		Partial Stroke Device					
ACTUATOR	47	Plug Guide		NA		OPTIONS	74	Quick Exhaust					
	48	Type	Model	Piston			75	Air Lock					
	49	Piston Acting		Single Acting Pneumatic			76	Actuator fire Proofing					
	50	Open / Close Time		10 Sec			77	Thermal Fuse					
	51	Handwh. Loc.		Required			78	SIL Rating					
	52	Size	Spring Range	125S	(*)		79						
	53	Travel	Travel Lock	0- 90°	NA		PURCHASE	80	MR No.				
	54	PNEUMATIC CONNECTION	Material	SS 316				81	PO No.		Later		
	55	CONNECTION	Size	1/4" (*)		82		Manufacturer		Later			
	56	Execution				83		Model		Later			
	57	Model		(*)			84	Supplier		Later			

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)	OWNER DOCUMENT NUMBER Sheet: 53 of 56
5	Y.X	5.Jun.2024	IFR		
4	Y.X	3.APR.2024	IFR		
3	M.Kh	13.09.2021	Issued for Purchase		
2	M.Kh	28-07-2021	Issued for Approval		
Nr.	By	Date	Revision		Rev: 6

Tag Number: 80-HV-990603

Notes:

1. Air failure last position (i.e "if in OPEN condition, valve will stay open; if in CLOSE position, valve will stay closed"), manual operation of valves to be possible by means of gearbox + handwheel.
2. Normal Operating Conditions: Solenoid is de-energized, valve closed; When energized, valve open. Solenoid valve is equipped with a locking device (latch) that will force the solenoid to keep the ENERGIZED position even in case of POWER FAIL.
Working of latching device : when the solenoid is ENERGIZED, the latching lever will automatically lock in position, thus preventing solenoid to switch in case of power fail. Once the emergency is over, latching device will have to be manually unlocked by operators to resume standard operating condition.
3. Trim Material : Disc: A 216 WCB + EPDM Sleeve, Stem: 13% Cr,Seat: 13% Cr,Seat Insert: EPDM.



			JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			  Tecnimont  Polimeri Europa		
6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)		OWNER DOCUMENT NUMBER		
5	Y.X	5.Jun.2024	IFR					
4	Y.X	3.APR.2024	IFR			Sheet: 54 of 56		
3	M.Kh	13.09.2021	Issued for Purchase					
2	M.Kh	28-07-2021	Issued for Approval					
Nr.	By	Date	Revision					Rev: 6

GENERAL	1	Tag Number	P&ID No.	80-HV-990604	J-80-PID-6914-3 (2/2)						
	2	Service	80-TK-6950B, FOAM SYSTEM ACN								
	3	Allowable Sound Pressure Level (dBA)	< 85 dB(A)								
	4	Air Supply Pressure: Min / Nor / Max / Design	5.5 bar-g	7 bar-g	10.5 bar-g						
	5	Fire-Safe Execution	Antistatic Device	NA	Required						
	6	Line: Number (In)	Size (In)	Schedule (In)	2"-FW-69144A-2PBNB-N	2"					
	7	Line: Number (Out)	Size (Out)	Schedule (Out)	3"-FW-69145A-2PBNB-N	3"					
	8	Line Class	Pipe Material	2PBN	ASTM A 53 GR. B Galvanized	ASTM A 106 GR. B Galvanized					
	9	TA-Luft Certification	NA								
DESIGN	10	Pressure Min / Max	Temperature Min / Max	19.0	barg	85	°C				
HAZARDOUS AREA	11	Classification	Zone 2, Temperature Class T4, Gas Group IIC								
	12	Execution	Certification	EEx (ia)			IEC/ATEX				
PROCESS CONDITIONS	13	Fluid	Fluid State	AR-AFFFFF-Foam Solution			LIQUID				
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density	5		998		kg/m3				
	16	Specific Gravity			1.00		---				
	17						---				
	18						---				
	19	Inlet Viscosity			0.3		Cp				
	20	Solids %			nil						
	21	Flow Rate		8952	45000	45000	kg/h				
	22	Inlet Pressure			6.21		barg				
	23	Pressure Drop			0.15						
	24	Inlet Temperature	6	5	30	48	°C				
	25	Max Shut-off Differential Pressure (bar)			19.0		barg				
	26	Leakage Class	ANSI IV (standard)								
	27	Power Failure Position	Air Failure Position	Last		LAST					
28	Travel Time	less than 10 sec									
CALCULATION DATA	29	Flow Coefficient Cv				---					
	30	Sound Pressure Level		85		dBA					
SELECTED VALVE	31	Type	Butterfly	MATERIAL	58	Body / Bonnet	Jacket	A216 WCB	NA		
	32	Cv	Leakage Class		59	Plug	Seat	Note 3	Note 3		
	33	Temp. Max	D.P. Max		85°C	19 barg	60	Sealing	Packing	Viton	Flex Graphite
	34	Sound Pressure Level	<85dBA		61	Plug Guides	SS316				
	35				62						
BODY	36	End Connection: Type	Lug	AIR SET	63	Filter Regulat. & Gauge	Required				
	37	Roughness	125-250 AARH		64	Material	Model	SS316	(*)		
	38	Size	2"	LIMIT SWITCH	65	Tag Number	80-HZSH/L-990604				
	39	Rating	150#		66	Quantity	Model	2	(*)		
	40	Facing	RF	SOLENOID VALVE	67	Tag Number	80-HY-990604				
41	Flow Action To	NA	68		Quantity	Model	1	(*)			
42	Bonnet Type	Lubricat.	NA		69	Reset	Auto (norm de-energised)				
TRIM	43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	70	Tag Number	NA				
	44	Port	Full Bore		71	Model	NA				
	45	Plug Type	butterfly plate		72						
	46	Sealing Seat / Plug	Metallic		73	Partial Stroke Device					
ACTUATOR	47	Plug Guide	NA	OPTIONS	74	Quick Exhaust					
	48	Type	Model		Piston	75	Air Lock				
	49	Piston Acting	Single Acting Pneumatic		76	Actuator fire Proofing					
	50	Open / Close Time	10 Sec		77	Thermal Fuse					
	51	Handwh. Loc.	Required		78	SIL Rating					
	52	Size	Spring Range	125S	(*)	79					
	53	Travel	Travel Lock	0- 90°	NA	PURCHASE	80	MR No.			
	54	PNEUMATIC CONNECTION	Material	SS 316	81		PO No.	Later			
	55	CONNECTION	Size	1/4" (*)	82		Manufacturer	Later			
	56	Execution			83		Model	Later			
57	Model	(*)		84	Supplier		Later				
Notes: See notes											
		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			 						
6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)	OWNER DOCUMENT NUMBER Sheet: 55 of 56						
5	Y.X	5.Jun.2024	IFR								
4	Y.X	3.APR.2024	IFR								
3	M.Kh	13.09.2021	Issued for Purchase								
2	M.Kh	28-07-2021	Issued for Approval								
Nr.	By	Date	Revision		Rev: 6						

Tag Number: 80-HV-990604

Notes:

1. Air failure last position (i.e "if in OPEN condition, valve will stay open; if in CLOSE position, valve will stay closed"), manual operation of valves to be possible by means of gearbox + handwheel.

2. Normal Operating Conditions: Solenoid is de-energized, valve closed; When energized, valve open. Solenoid valve is equipped with a locking device (latch) that will force the solenoid to keep the ENERGIZED position even in case of POWER FAIL.

Working of latching device : when the solenoid is ENERGIZED, the latching lever will automatically lock in position, thus preventing solenoid to switch in case of power fail. Once the emergency is over, latching device will have to be manually unlocked by operators to resume standard operating condition

3. Trim Material : Disc: A 216 WCB + EPDM Sleeve, Stem: 13% Cr,Seat: 13% Cr,Seat Insert: EPDM.

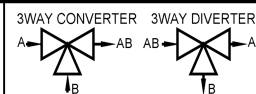


			JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)					
6	Y.X	14.Jun.2024	IFR	DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES (ACN)			OWNER DOCUMENT NUMBER	
5	Y.X	5.Jun.2024	IFR					
4	Y.X	3.APR.2024	IFR				Sheet: 56 of 56	
3	M.Kh	13.09.2021	Issued for Purchase					
2	M.Kh	28-07-2021	Issued for Approval					
Nr.	By	Date	Revision				Rev: 6	

GENERAL	1	Tag Number	P&ID No.	80-EVX-695101	J-80-PID-6951		
	2	Service	ACRYLONITRILE TO 80-RE-6950				
	3	Allowable Sound Pressure Level (dBA)	< 85 dB(A)				
	4	Air Supply Pressure: Min / Nor / Max / Design					
	5	5 Fire-Safe Execution	Antistatic Device	Firesafe Design	Yes		
	6	Line: Number (In)	Size (In)	Schedule (In)	12"-AN-69022A-2AAYA-C	12"	
	7	Line: Number (Out)	Size (Out)	Schedule (Out)	12"-AN-69798A-2AAYA-C	12"	
	8	Line Class	Pipe Material				
	9	TA-Luft Certification					
DESIGN	10	Pressure Min / Max	Temperature Min / Max	10	barg	85	°C
HAZARDOUS AREA	11	Classification	Zone 2, Gr. IIA & IIB, T3				
	12	Execution	Certification	EEx-ia			IEC/ATEX
PROCESS CONDITIONS	13	Fluid	Fluid State	ACRYLONITRILE		LIQUID	
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units
	15	Inlet Density			711		kg/m3
	16	Specific Gravity			0.72		
	17						
	18						
	19	Inlet Viscosity			0.28		cP
	20	Solids %			nil		
	21	Flow Rate			600,000		kg/h
	22	Inlet Pressure			1.5~ 4		barg
	23	Pressure Drop					
	24	Inlet Temperature			40		°C
	25	Max Shut-off Differential Pressure (bar)			10.0		barg
	26	Leakage Class					
	27	Power Failure Position	Air Failure Position	FC			
28	Travel Time						
CALCULATION DATA	29	Flow Coefficient Cv					
	30	Sound Pressure Level					
SELECTED VALVE	31	Type	Ball				
	32	Cv	Leakage Class	(*)	(*) Note 2		
	33	Temp. Max	D.P. Max	(*)	(*)		
	34	Sound Pressure Level	(*)				
	35						
BODY	36	End Connection: Type	Flanged				
	37	Roughness	125-250 AARH				
	38	Size	12"				
	39	Rating	150#				
	40	Facing	RF				
	41	Flow Action To	NA				
	42	Bonnet Type	Lubricat.	STD (*)	(*)		
	43	Jacket and Connection	NA				
TRIM	44	Port	Full Bore				
	45	Plug Type	Ball				
	46	Sealing Seat / Plug	Metallic				
ACTUATOR	47	Plug Guide	Trunnion Ball				
	48	Type	Model	Piston	(*)		
	49	Piston Acting	Single Acting Pneumatic				
	50	Open / Close Time	closing time Min. 30 sec.				
	51	Handwh. Loc.	Required/TBA				
	52	Travel time (closing)	Min. 30 sec.				
	53						
	54	PNEUMATIC CONNECTION		Material SS316 , Size 1/4"			
	55	Execution					
	56	Model	*				
MATERIAL	58	Body / Bonnet	Jacket	A216 WCB	NA		
	59	Plug	Seat	SS316+CoCr	SS316+CoCr		
	60	Sealing	Packing	Viton			
	61	Plug Guides	SS316				
	62						
	63	Filter Regulat. & Gauge					
	64	Material	Model	(*)			
	65	Tag Number	80-EZSH/LX-695101				
	66	Quantity	Model	2	(*)		
	67	Tag Number					
LIMIT SWITCH (Note 1)	68	Quantity	Model	(*)			
	69	Reset					
	70	Tag Number	NA				
SOLENOID VALVE	71	Model	NA				
	72						
	73	Partial Stroke Device					
PNEUMATIC DISTRIBUTOR	74	Quick Exhaust					
	75	Air Lock					
	76	Actuator fire Proofing					
	77	Thermal Fuse					
	78	SIL Rating					
	79						
	80	MR No.					
OPTIONS	81	PO No.	Later				
	82	Manufacturer	(*)				
	83	Model	(*)				
	84	Supplier	(*)				
PURCHASE	80	MR No.					
	81	PO No.	Later				
	82	Manufacturer	(*)				
	83	Model	(*)				
84	Supplier	(*)					
Notes: 1- Limit switches shall be namur type. 2- Tight Shutoff characteristic.							
 شرکت پتروشیمی جیم (سهایی هاس) Jam Petrochemical Company JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)  شرکت جندی شاپور ONDISHAPOUR CO.  Tecnimont  Polimeri Europa DATASHEET FOR PNEUMATIC DRIVEN ON/OFF VALVES OWNER DOCUMENT NUMBER							
Nr.	By	Date	Revision				

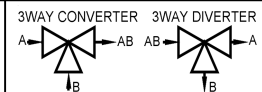
GENERAL	1	Tag Number	P&ID No.	85-EVX -210112	J-85-PID-2101-0						
	2	Service			TO 85-MX-2101						
	3	Allowable Sound Pressure Level (dBA)			<85 dB(A)						
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 Barg	7 Barg	10.5 Barg				
	5	Fire-Safe Execution	Antistatic Device	Firesafe Design	Yes						
	6	Line: Number (In)	Size (In)	Schedule (In)	2"-OA-21005A-2AAFA-H	2 in	80				
	7	Line: Number (Out)	Size (Out)	Schedule (Out)							
	8	Line Class	Pipe Material	2AAF	Carbon Steel						
	9	TA-Luft Certification			NO						
DESIGN	10	Pressure Min / Max	Temperature Min / Max	9 bar-g	155 °C						
HAZARDOUS AREA	11	Classification			Zone 2, Temperature Class T4, Gas Group IIC						
	12	Execution	Certification	EE x (ia)	IEC / ATEX						
PROCESS CONDITIONS	13	Fluid	Fluid State	Aromatic Oil	Liquid						
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density				1015	kg/m³				
	16	Specific Gravity					---				
	17						---				
	18						---				
	19	Inlet Viscosity				50	mPa-s				
	20	Solids %									
	21	Flow Rate				2540	kg/h				
	22	Inlet Pressure				3.2	bar-g				
	23	Pressure Drop				0.05	bar				
	24	Inlet Temperature				50	°C				
	25	Max Shut-off Differential Pressure			9	bar					
	26	Leakage Class			ANSI V						
	27	Power Failure Position	Air Failure Position	Fail Close	Fail Close						
	28	Travel Time			3 Sec						
	CALCULATION DATA	29	Flow Coefficient Cv				---				
30		Sound Pressure Level				dBA					
SELECTED VALVE	31	Type	Ball	MATERIAL	57	Body / Bonnet	Jacket	A216WCB	NA		
	32	Cv	Leakage Class		58	Plug	Seat	SS316+Co C	SS316+Co C		
	33	Temper. Max	DP Max		59	Sealing	Packing	Viton	Flex Graphite		
	34	Sound Pressure Level	<85dBA		60	Plug Guides		SS316			
	35				61						
BODY	36	End Connection: Type	Flanged	AIR SET	62	Filter Regulator & Gauge	Required				
	37	Roughness	125-250 AARH		63	Material	Model	SS316	Note-3.29		
	38	Size	2"	LIMIT SWITCH	64	Tag Number	85-EZSHX/LX-210112				
	39	Rating	150#		65	Quantity	Model	2	Note-3.30		
	40	Facing	RF	SOLENOID VALVE	66	Tag Number	85-EYX-210112				
	41	Flow Action To	NA		67	Quantity	Model	1	Note 3.31		
	42	Bonnet Type	Lubric.		STD	NA	68	Reset	Auto Reset		
TRIM	43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	69	Tag Number	NA				
	44	Port	Full Bore		70	Model	NA				
	45	Plug Type	Ball		71						
ACTUATOR	46	Sealing Seat / Plug	Metallic	OPTIONS	72	Partial Stroke Device					
	47	Plug Guide	Floating Ball		73	Quick Exhaust					
	48	Type	Model		Piston	74	Air Lock				
	49	Piston Acting	Single Effect Pneumatic			75	Actuator fire Proofing				
	50	Open / Close Time	3 sec			76	Thermal Fuse	Yes			
	51	Handwh. Loc.	Not Required			77	SIL Rating	SIL 2			
	52	Size	Spring Range		160S	L05	78				
	53	Travel	Travel Lock		0 - 90°	NA	79	MR No.			
	54	PNEUMATIC CONNECTION	Material		SS 316	PURCHASE	80	PO No.			
	55	CONNECTION	Size		1/4"		81	Manufacturer			
56	Execution			82	Model						
57	Model	RAM 00025/160S L05NFC			83	Supplier					

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)					
		INSTRUMENT SPECIFICATION Shut-off Valve		Owner Document Number Sheet: 294 of 405			
1	M29					26-06-2017	Issued for Purchase
0	DD4					13-08-2015	Issued for Approval
Nr.	By	Date	Revision	Code: 655	Doc. No.: 3863-KK-SE-8500115	Rev.: 1	

GENERAL	1	Tag Number	P&ID No.	88-EVX -900202		J-88-PID-9002-0					
	2	Service		BRINE WATER RTN FR P9004S							
	3	Allowable Sound Pressure Level (dBA)		<85 dBA)							
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 Barg	7 Barg	10 Barg					
	5	Fire-Safe Execution	Antistatic Device	NA		Yes					
	6	Line: Number (In)	Size (In)	Schedule (In)	10"-BWR-90013A-2ABNA-C	10 in	20				
	7	Line: Number (Out)	Size (Out)	Schedule (Out)							
	8	Line Class	Pipe Material	2ABN		Carbon Steel					
	9	TA-Luft Certification									
DESIGN	10	Pressure Min / Max	Temperature Min / Max	11 bar-g		85 °C					
HAZARDOUS AREA	11	Classification		Zone 2, Temperature Class T4, Gas Group IIC							
	12	Execution	Certification	EE x (ia)		IEC / ATEX					
PROCESS CONDITIONS	13	Fluid	Fluid State	Brine water		Liquid					
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density				1052	kg/m³				
	16	Specific Gravity					---				
	17						---				
	18						---				
	19	Inlet Viscosity				4.43	cP				
	20	Solids %									
	21	Flow Rate				430	Am³/h				
	22	Inlet Pressure				8.32	bar-g				
	23	Pressure Drop					bar				
	24	Inlet Temperature				2	°C				
	25	Max Shut-off Differential Pressure			11	bar					
	26	Leakage Class			ANSI V						
	27	Power Failure Position	Air Failure Position	Fail Close		Fail Close					
	28	Travel Time		10 secs							
	CALCULATION DATA	29	Flow Coefficient Cv					---			
30		Sound Pressure Level					dBA				
SELECTED VALVE	31	Type	Ball	MATERIAL	57	Body / Bonnet	Jacket	A216 WCB	NA		
	32	Cv	Leakage Class		(*)	(*)	58	Plug	Seat	SS316+Co C	SS316+Co C
	33	Temper. Max	DP Max		(*)	(*)	59	Sealing	Packing	Graphite	Flex Graphite
	34	Sound Pressure Level			(*)		60	Plug Guides		SS 316	
	35						61				
BODY	36	End Connection: Type	Flanged	AIR SET	62	Filter Regulator & Gauge		Required			
	37	Roughness	125-250 AARH		63	Material	Model	SS316	(*)		
	38	Size	10"	LIMIT SWITCH	64	Tag Number		88-EZSHX/LX-900203			
	39	Rating	150#		65	Quantity	Model	2	(*)		
	40	Facing	RF	SOLENOID VALVE	66	Tag Number		88-EYX-900203			
	41	Flow Action To	(*)		67	Quantity	Model	1	(*)		
	42	Bonnet Type	Lubric.		STD	NA	68				
43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	69	Tag Number		NA				
44	Port	Full Bore		70	Model		NA				
45	Plug Type	Ball		71							
TRIM	46	Sealing Seat / Plug	Metallic	OPTIONS	72	Partial Stroke Device					
	47	Plug Guide	Trunnion Ball		73	Quick Exhaust					
	48	Type	Model		Piston		74	Air Lock			
49	Piston Acting		Single Effect Pneumatic			75	Actuator fire Proofing				
50	Open / Close Time		10 sec			76	Thermal Fuse	Yes			
51	Handwh. Loc.		Required/TBA			77					
52	Size	Spring Range	(*)		(*)	78					
53	Travel	Travel Lock	(*)		NA	PURCHASE	79	MR No.			
54	PNEUMATIC CONNECTION	Material	SS 316		80		PO No.	Later			
55	CONNECTION	Size	1/4"		81		Manufacturer	(*)			
56	Execution				82		Model	(*)			
57	Model				83		Supplier				
Notes: See notes											
				JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)							
								 			
				INSTRUMENT SPECIFICATION Shut-off Valve				Owner Document Number			
								Sheet: 1 of 2			
Nr.	By	Date	Revision	Code: 655	Doc. No.:	3863-KK-SE-8800115	Rev.:				

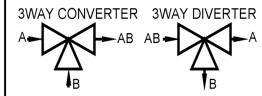


1. Max. allowable pressure drop is min. at max. flowrate.

				INSTRUMENT SPECIFICATION Shut-off Valve	   	
					Sheet 2 of 2	
No.	By	Date	Revision	Code: 655	Dwg. No.: 3863-KK-SE-8800115	Rev.:

GENERAL	1	Tag Number	P&ID No.	88-EVX -900203		J-88-PID-9002-0					
	2	Service		BRINE WATER RTN FR P9004S							
	3	Allowable Sound Pressure Level (dBA)		<85 dBA							
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 Barg	7 Barg	10 Barg					
	5	Fire-Safe Execution	Antistatic Device	NA		Yes					
	6	Line: Number (In)	Size (In)	Schedule (In)	10"-BWR-90014A-2ABNA-C	10 in	20				
	7	Line: Number (Out)	Size (Out)	Schedule (Out)							
	8	Line Class	Pipe Material	2ABN		Carbon Steel					
	9	TA-Luft Certification									
DESIGN	10	Pressure Min / Max	Temperature Min / Max	11 bar-g		85 °C					
HAZARDOUS AREA	11	Classification		Zone 2, Temperature Class T4, Gas Group IIC							
	12	Execution	Certification	EE x (ia)		IEC / ATEX					
PROCESS CONDITIONS	13	Fluid	Fluid State	Brine water		Liquid					
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density				1052	kg/m³				
	16	Specific Gravity					---				
	17						---				
	18						---				
	19	Inlet Viscosity				4.43	cP				
	20	Solids %									
	21	Flow Rate				430	Am³/h				
	22	Inlet Pressure				8.32	bar-g				
	23	Pressure Drop					bar				
	24	Inlet Temperature				2	°C				
	25	Max Shut-off Differential Pressure		11 bar							
	26	Leakage Class		ANSI V							
	27	Power Failure Position	Air Failure Position	Fail Open		Fail Open					
	28	Travel Time		10 secs							
	CALCULATION DATA	29	Flow Coefficient Cv					---			
30		Sound Pressure Level					dBA				
SELECTED VALVE	31	Type	Ball	MATERIAL	57	Body / Bonnet	Jacket	A216 WCB	NA		
	32	Cv	Leakage Class		(*)	(*)	58	Plug	Seat	SS316+Co C	SS316+Co C
	33	Temper. Max	DP Max		(*)	(*)	59	Sealing	Packing	Graphite	Flex Graphite
	34	Sound Pressure Level			(*)		60	Plug Guides		SS 316	
	35						61				
BODY	36	End Connection: Type	Flanged	AIR SET	62	Filter Regulator & Gauge		Required			
	37	Roughness	125-250 AARH		63	Material	Model	SS316	(*)		
	38	Size	10"	LIMIT SWITCH	64	Tag Number		88-EZSHX/LX-900203			
	39	Rating	150#		65	Quantity	Model	2	(*)		
	40	Facing	RF	SOLENOID VALVE	66	Tag Number		88-EYX-900203			
	41	Flow Action To	(*)		67	Quantity	Model	1	(*)		
	42	Bonnet Type	Lubric.		STD	NA	68				
43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	69	Tag Number		NA				
44	Port	Full Bore		70	Model		NA				
45	Plug Type	Ball		71							
TRIM	46	Sealing Seat / Plug	Metallic	OPTIONS	72	Partial Stroke Device					
	47	Plug Guide	Trunnion Ball		73	Quick Exhaust					
ACTUATOR	48	Type	Model		Piston	74	Air Lock				
	49	Piston Acting	Single Effect Pneumatic		75	Actuator fire Proofing					
	50	Open / Close Time	10 sec		76	Thermal Fuse		Yes			
	51	Handwh. Loc.	Required/TBA		77						
	52	Size	Spring Range		(*)	(*)	78				
	53	Travel	Travel Lock		(*)	NA	PURCHASE	79	MR No.		
	54	PNEUMATIC CONNECTION	Material	SS 316	80	PO No.		(*)			
	55	CONNECTION	Size	1/4"	81	Manufacturer		(*)			
	56	Execution			82	Model		(*)			
	57	Model			83	Supplier					

Notes: See notes



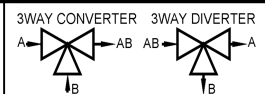
	JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)	  				
		Owner Document Number				
		Sheet: 1 of 2				
Nr.	By	Date	Revision	Code: 655	Doc. No.: 88-EVX -900203-SP	Rev.:

1. Max. allowable pressure drop is min. at max. flowrate.

				INSTRUMENT SPECIFICATION Shut-off Valve	  		
					Sheet 2 of 2		
No.	By	Date	Revision		Code: 655	Dwg. No.: 88-EVX -900203-SP	
						Rev.:	

GENERAL	1	Tag Number	P&ID No.	88-EVX -900614	J-88-PID-9006-0	
	2	Service	MP STEAM TO RUBBER PLANT			
	3	Allowable Sound Pressure Level (dBA)	<85 dBA			
	4	Air Supply Pressure: Min / Nor / Max / Design	5.5 Barg	7 Barg	10.5 Barg	
	5	Fire-Safe Execution	Antistatic Device	NA	Yes	
	6	Line: Number (In)	Size (In)	Schedule (In)	10"-HPS-00001A-5CAND-H	10" in
	7	Line: Number (Out)	Size (Out)	Schedule (Out)	10"	80
	8	Line Class	Pipe Material	5CAN	1,25 CHROME + 0.5 MO	
	9	TA-Luft Certification	Not Required			
DESIGN	10	Pressure Min / Max	Temperature Min / Max	-1 47 bar-g	470 °C	
HAZARDOUS AREA	11	Classification	Zone 2, Temperature Class T4, Gas Group IIC			
	12	Execution	Certification	EE x (ia)	IEC / ATEX	
PROCESS CONDITIONS	13	Fluid	Fluid State	High Pressure Steam	Gas/Vapor	
	14			@ Min. Flow	@ Norm. Flow	
	15	Inlet Density			13.8 kg/m³	
	16	Molecular Mass			---	
	17	Inlet Specific Heats Ratio Cp/Cv			---	
	18	Inlet Compressibility Factor			---	
	19	Inlet Viscosity			0.025 mPa.s	
	20	Solids %				
	21	Flow Rate			56634 kg/h	
	22	Inlet Pressure	38		42 bar-g	
	23	Pressure Drop			0.05 bar	
	24	Inlet Temperature	400		430 °C	
	25	Max Shut-off Differential Pressure	48		bar	
	26	Leakage Class	ANSI V			
	27	Power Failure Position	Air Failure Position	Fail Close	Fail Close	
	28	Travel Time	10 Sec			
	CALCULATION DATA	29	Flow Coefficient Cv			---
30		Sound Pressure Level			dBA	
SELECTED VALVE	31	Type	Ball			
	32	Cv	Leakage Class	ANSI V		
	33	Temper. Max	DP Max	470°C	48 barg	
	34	Sound Pressure Level	<85dBA			
	35					
BODY	36	End Connection: Type	Flanged			
	37	Roughness	125-250 AARH			
	38	Size	10"			
	39	Rating	600#			
	40	Facing	RF			
	41	Flow Action To	NA			
	42	Bonnet Type	Lubric.	EXT	NA	
TRIM	43	Jacket and Connection	NA			
	44	Port	Full Bore			
	45	Plug Type	Ball			
	46	Sealing Seat / Plug	Metallic			
ACTUATOR	47	Plug Guide	Trunnion Ball			
	48	Type	Model	Piston		
	49	Piston Acting	Single Effect Pneumatic			
	50	Open / Close Time	10 sec			
	51	Handwh. Loc.	Required/TBA			
	52	Size	Spring Range	915S	(*)	
	53	Travel	Travel Lock	0 - 90°	NA	
	54	PNEUMATIC CONNECTION	Material	SS 316		
	55	CONNECTION	Size	1/4"		
	56	Execution				
	57	Model	RSPMR07500/915S XXXN			
MATERIAL	57	Body / Bonnet	Jacket	A217 WC6	NA	
	58	Plug	Seat	SS 316 (STL)	SS 316 (STL)	
	59	Sealing	Packing	Graphite	Flex Graphite	
	60	Plug Guides	SS 316			
	61					
	62	Filter Regulator & Gauge	Required			
	63	Material	Model	SS316	Note-3.29	
	64	Tag Number	88-EZSHX/LX-900614			
	65	Quantity	Model	2	Note-3.30	
	66	Tag Number	88-EYX-900614			
	67	Quantity	Model	1	Note 3.31	
AIR SET	68	Reset	Auto Reset			
	69	Tag Number	NA			
LIMIT SWITCH	70	Model	NA			
	71					
SOLENOID VALVE	72	Partial Stroke Device	Required (Note -2)			
	73	Quick Exhaust				
PNEUMATIC DISTRIBUTOR	74	Air Lock				
	75	Actuator fire Proofing				
	76	Thermal Fuse	Yes			
	77	SIL Rating	SIL 1			
	78					
OPTIONS	79	MR No.				
	80	PO No.				
	81	Manufacturer				
	82	Model				
	83	Supplier				
PURCHASE						

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Shut-off Valve	
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					Rev.: 0

Tag Number : 88-EVX -900614

1. Flow & line size are on Hold, subjected to confirmation by flare vendor MPS requirement for smokeless operation
2. Partial stroke device is manufactured by MAKER FOXBORO ECKARDT SERIE SRD991 MODEL CODE SRD991-BHESN7EAAN-BXQE.

				INSTRUMENT SPECIFICATION Shut-off Valve		   	
0	DD4	13-08-2015	Issued for Approval			Sheet 34	of 58
No.	By	Date	Revision	Code: 655	Dwg. No.: 3863-KK-SE-8800115	Rev.: 0	

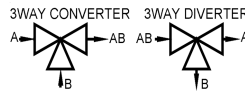
GENERAL	1	Tag Number	P&ID No.	88-EVX -900701		J-88-PID-9007-0					
	2	Service		MP NITROGEN TO UTILITY DISTRIBUTION							
	3	Allowable Sound Pressure Level (dBA)		<85 dB(A)							
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 Barg	7 Barg	10 Barg					
	5	Fire-Safe Execution	Antistatic Device	NA		Yes					
	6	Line: Number (In)	Size (In)	Schedule (In)	4"-MN-90001A-2AANB-N		4 in 40				
	7	Line: Number (Out)	Size (Out)	Schedule (Out)							
	8	Line Class	Pipe Material	2AAN		Carbon Steel					
	9	TA-Luft Certification									
DESIGN	10	Pressure Min / Max	Temperature Min / Max	10.5 bar-g		85 °C					
HAZARDOUS AREA	11	Classification		Zone 2, Temperature Class T4, Gas Group IIC							
	12	Execution	Certification	EE x (ia)		IEC / ATEX					
PROCESS CONDITIONS	13	Fluid	Fluid State	MP Nitrogen		Gas/Vapor					
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density				8.6	kg/m³				
	16	Molecular Mass				28	---				
	17	Inlet Specific Heats Ratio Cp/Cv					---				
	18	Inlet Compressibility Factor					---				
	19	Inlet Viscosity				0.025	cP				
	20	Solids %									
	21	Flow Rate				450	Nm³/h				
	22	Inlet Pressure	6			8	bar-g				
	23	Pressure Drop					bar				
	24	Inlet Temperature				48	°C				
	25	Max Shut-off Differential Pressure	10.5		bar						
	26	Leakage Class	ANSI V								
	27	Power Failure Position	Air Failure Position	Fail Close		Fail Close					
	28	Travel Time	3 secs								
	CALCULATION DATA	29	Flow Coefficient Cv					---			
30		Sound Pressure Level					dBA				
SELECTED VALVE	31	Type	Ball	MATERIAL	57	Body / Bonnet	Jacket	A216 WCB	NA		
	32	Cv	Leakage Class		(*)	(*)	58	Plug	Seat	SS316+Co C	SS316+Co C
	33	Temper. Max	DP Max		85°C	(*)	59	Sealing	Packing	VITON	Graphite
	34	Sound Pressure Level	(*)			60	Plug Guides		SS 316		
	35					61					
BODY	36	End Connection: Type	Flanged	AIR SET	62	Filter Regulator & Gauge	Required				
	37	Roughness	125-250 AARH		63	Material	Model	SS316	(*)		
	38	Size	4"	LIMIT SWITCH	64	Tag Number	88-EZSHX/LX-900701				
	39	Rating	150#		65	Quantity	Model	2	(*)		
	40	Facing	RF	SOLENOID VALVE	66	Tag Number	88-EYX-900701				
	41	Flow Action To	(*)		67	Quantity	Model	1	(*)		
	42	Bonnet Type	Lubric.		STD	NA	68				
43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	69	Tag Number	NA					
44	Port	Full Bore		70	Model	NA					
45	Plug Type	Ball		71							
TRIM	46	Sealing Seat / Plug	Metallic	OPTIONS	72	Partial Stroke Device					
	47	Plug Guide	Trunnion Ball		73	Quick Exhaust					
ACTUATOR	48	Type	Model		Piston	74	Air Lock				
	49	Piston Acting	Single Effect Pneumatic			75	Actuator fire Proofing				
	50	Open / Close Time	< 5 sec			76	Thermal Fuse	Yes			
	51	Handwh. Loc.	Required/TBA			77					
	52	Size	Spring Range		(*)	(*)	78				
	53	Travel	Travel Lock		(*)	NA	PURCHASE	79	MR No.		
	54	PNEUMATIC CONNECTION	Material	SS 316	80	PO No.		Later			
	55	Size	1/4"	81	Manufacturer	(*)					
	56	Execution		82	Model	(*)					
	57	Model		83	Supplier						
Notes: See notes											
JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)   											
INSTRUMENT SPECIFICATION Shut-off Valve					Owner Document Number						
					Sheet: 1 of 2						
Nr.	By	Date	Revision	Code: 655	Doc. No.:	3863-KK-SE-8800115		Rev.:			

1. Max. allowable pressure drop is min. at max. flowrate.

				INSTRUMENT SPECIFICATION Shut-off Valve	   	
					Sheet 2 of 2	
No.	By	Date	Revision	Code: 655	Dwg. No.: 3863-KK-SE-8800115	Rev.:

GENERAL	1	Tag Number	P&ID No.	88-UV -900501	J-88-PID-9005-0						
	2	Service			TO HP NITROGEN BUFFER TANK						
	3	Allowable Sound Pressure Level (dBA)			<85 dBA)						
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 Barg	7 Barg	10 Barg				
	5	Fire-Safe Execution	Antistatic Device	NA	Yes						
	6	Line: Number (In)	Size (In)	Schedule (In)	1 1/2"-HN-90500A-4ABNA-N	1 1/2 in	80				
	7	Line: Number (Out)	Size (Out)	Schedule (Out)							
	8	Line Class	Pipe Material	4ABN	Carbon Steel						
	9	TA-Luft Certification			Not Required						
DESIGN	10	Pressure Min / Max	Temperature Min / Max	22 bar-g	85 °C						
HAZARDOUS AREA	11	Classification			Zone 2, Temperature Class T4, Gas Group IIC						
	12	Execution	Certification	EE x (ia)	IEC / ATEX						
PROCESS CONDITIONS	13	Fluid	Fluid State	Brine water	Gas/Vapor						
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units				
	15	Inlet Density				18.64	kg/m³				
	16	Molecular Mass				28	---				
	17	Inlet Specific Heats Ratio Cp/Cv					---				
	18	Inlet Compressibility Factor					---				
	19	Inlet Viscosity				0.025	mPa.s				
	20	Solids %									
	21	Flow Rate				200	Nm³/h				
	22	Inlet Pressure				20	bar-g				
	23	Pressure Drop					bar				
	24	Inlet Temperature				48	°C				
	25	Max Shut-off Differential Pressure				22	bar				
	26	Leakage Class				ANSI V					
	27	Power Failure Position	Air Failure Position	Fail Close	Fail Close						
	28	Travel Time		10 secs							
	CALCULATION DATA	29	Flow Coefficient Cv					---			
30		Sound Pressure Level					dBA				
SELECTED VALVE	31	Type	Ball	MATERIAL	57	Body / Bonnet	Jacket	A216 WCB	NA		
	32	Cv	Leakage Class		(*)	(*)	58	Plug	Seat	SS316+Co C	SS316+Co C
	33	Temper. Max	DP Max		(*)	(*)	59	Sealing	Packing	Graphite	Flex Graphite
	34	Sound Pressure Level	(*)			60	Plug Guides		SS 316		
	35					61					
BODY	36	End Connection: Type	Flanged	AIR SET	62	Filter Regulator & Gauge	Required				
	37	Roughness	125-250 AARH		63	Material	Model	SS316	(*)		
	38	Size	1 1/2"	LIMIT SWITCH	64	Tag Number	88-UZSH/SL-900501				
	39	Rating	300#		65	Quantity	Model	2	(*)		
	40	Facing	RF	SOLENOID VALVE	66	Tag Number	88-UY-900501				
	41	Flow Action To	(*)		67	Quantity	Model	1	(*)		
	42	Bonnet Type	Lubric.		STD	NA	68				
43	Jacket and Connection	NA	PNEUMATIC DISTRIBUTOR	69	Tag Number	NA					
44	Port	Full Bore		70	Model	NA					
45	Plug Type	Ball		71							
TRIM	46	Sealing Seat / Plug	Metallic	OPTIONS	72	Partial Stroke Device					
	47	Plug Guide	Floating Ball		73	Quick Exhaust					
ACTUATOR	48	Type	Model		Piston	74	Air Lock				
	49	Piston Acting	Single Effect Pneumatic			75	Actuator fire Proofing				
	50	Open / Close Time	10 sec			76	Thermal Fuse	Yes			
	51	Handwh. Loc.	Required/TBA			77					
	52	Size	Spring Range		(*)	(*)	78				
	53	Travel	Travel Lock		(*)	NA	PURCHASE	79	MR No.		
	54	PNEUMATIC CONNECTION	Material	SS 316	80	PO No.		(*)			
	55	CONNECTION	Size	1/4"	81	Manufacturer		(*)			
	56	Execution				82		Model	(*)		
	57	Model				83		Supplier			

Notes: See notes



 شرکت پتروشیمی جم (بندر آسألویه) Jam Petrochemical Company	JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)	 شرکت چندی شاپور  				
		Owner Document Number				
		Sheet: 1 of 2				
Nr.	By	Date	Revision	Code: 655	Doc. No.: 3863-KK-SE-8800115	Rev.:

INSTRUMENT SPECIFICATION
 Shut-off Valve

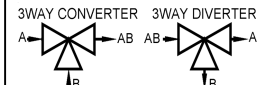
Tag Number : 88-UV -900501

1. Max. allowable pressure drop is min. at max. flowrate.

				INSTRUMENT SPECIFICATION Shut-off Valve	   		
					Sheet 2 of 2		
No.	By	Date	Revision	Code: 655	Dwg. No.: 3863-KK-SE-8800115		Rev.:

GENERAL	1	Tag Number	P&ID No.	85-FV -210110	J-85-PID-2101-0		
	2	Service	TO 85-MX-2101				
	3	Allowable Sound Pressure Level	DELETED				
	4	Air Supply Pressure: Min / No	10.5 bar-g				
	5	Line: Number (In)	Size (In)	2	in	80	
	6	Line: Number (Out)	Size (Out)				
	7	Line Class	Pipe	Carbon Steel			
	8						
DESIGN	9	Pressure Min / Max	Temp	85 °C			
HAZARDOUS AREA	10	Classification	Zone 2, Gr. IIA & IIB, T0				
PROCESS CONDITIONS	11	Execution	Certification	EEx-ia		IEC/ATEX	
	12	Fluid	Fluid State	Aromatic Oil		Liquid	
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	
	14	Inlet Density		1015	1015	1015	
	15	Specific Gravity				---	
	16	Inlet Vapour Pressure		-1.01	-1.01	-1.01	
	17					---	
	18	Inlet Viscosity		50	50	50	
	19	Critical Pressure				bar-g	
	20	Mass Vaporized	Solids %				
	21	Flow Rate		1000	1962	2500	
	22	Inlet Pressure		6.7	6	5.5	
	23	Pressure Drop		3.7	2.5	1.6	
	24	Inlet Temperature		50	50	50	
	25	Max Shut-off Differential Pressure		10		bar	
	26	Leakage Class		ANSI IV (standard)			
	CALCULATION DATA	27	Power Failure Position	Air Failure Position	FC	FC	
		28					
29		Flow Coefficient Cv		---	0.687	1.61	
30		Sound Pressure Level		dBA	57.9	58.2	
SELECTED VALVE	31	Vendor Flow Coefficient Cv		---	(*)	(*)	
	32	Type	Globe				
	33	Cv	Rangeability	(*)	(*)		
	34	Temp. Max	D.P. Max	(*)	(*)		
BODY	35	Leakage Class	(*)				
	36	Sound Pressure Level	(*)				
	37	End Connection: Type	Double Flanged				
	38	Roughness	125-250 AARH				
	39	Size	(*)				
	40	Rating	150#				
	41	Facing	RF				
	42	Flow Action To	(*)				
	43	Bonnet Type	Lubricat.	Standard	(*)		
	44	Jacket & Connection	NA				
MATERIAL	45	Bellow Seal Required	No				
	46	Fire Safe Required	Yes	NO	NO		
	47	TA-LUFT Required	Yes	NO			
	48	Port No.	Full / Red.	Single (*)	(*)		
POSITIONER	49	Plug Type	Character.	(*)	Equal %		
	50	Sealing Seat / Plug	Metallic				
	51	Balanced	Plug Guide	(*)	(*)		
	52						
TRIM	53	Type	Model	Diaphragm	(*)		
	54	Action	Handwh. Loc.	Direct	NA		
	55	Size	Spring Range	(*)	(*)		
	56	Travel	Travel Lock	(*)	NA		
ACTUATOR	57						
	58	Body / Bonnet	Jacket	A216WCB	NA		
	59	Plug	Seat	8-F6 & HF	8-F6 & HF		
	60	Plug Guides	Stem	(*)	(*)		
AIR SET	61	Yoke / Housing	Packing	(*)	Graphite		
	62	Bellows					
	63	Type	Model	E/P Smart	(*)		
	64	Input Signal Range		4-20 mA (HART)			
LIMIT SWITCH	65	Action		Direct			
	66	PNEUMATIC CONNECTION	Material	SS316			
	67	Size		1/4"			
	68	Mechanical Protection		IP65			
SOLENOID VALVE	69	Electrical Connection		ISO M20X1.5			
	70	Grounding Connection		Internal & External			
	71	Filter Regulat. & Gauge		Required			
	72	Material	Model	SS316	(*)		
OPTIONS	73	Tag Number					
	74	Quantity	Model				
	75	Tag Number					
	76	Quantity	Model				
PURCHASE	77						
	78	Booster	Air Lock	(*)	(*)		
	79	MR No.		J-85-IN-MRQ-1541-0004			
	80	PO No.		Later			
81	Manufacturer	(*)					
82	Model	(*)					
83	Supplier						

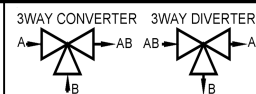
Notes: See notes



 JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)		  
INSTRUMENT SPECIFICATION Control Valve		Owner Document Number J-85-IN-DSH-1541-0004
0	RC2	11/09/2015
Nr.	By	Date
Issued for Approval		Revision
Code: 651	Doc. No.: 3863-KK-SE-8500104	Rev.: 0

GENERAL	1	Tag Number	P&ID No.	85-LV -150204A		J-85-PID-1502-0		
	2	Service			SLURRY FRM 85-P-1503/1503S TO D-1502			
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)			
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g		10.5 bar-g	
	5	Line: Number (In)	Size (In)	Schedule (In)	4"-SL-15036A-2DANC-H		10S	
	6	Line: Number (Out)	Size (Out)	Schedule (Out)				
	7	Line Class	Pipe Material	2DAN		Stainless Steel 304 L		
	8							
DESIGN	9	Pressure Min / Max	Temperature Min / Max	10 bar-g		165 °C		
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3			
	11	Execution	Certification	EEx-ia		IEC/ATEX		
PROCESS CONDITIONS	12	Fluid	Fluid State	Polymer Slurry		N/A or other		
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units	
	14	Inlet Density		960	960	960	kg/m³	
	15						---	
	16							
	17						---	
	18	Inlet Viscosity		0.29	0.29	0.29	mPa.s	
	19	Critical Pressure		220.2		bar-g		
	20	Mass Vaporized	Solids %					
	21	Flow Rate		20000	32774	83200	kg/h	
	22	Inlet Pressure		3.2	4.5	3	4.4	bar-g
	23	Pressure Drop		2.7	2.5	2.1	bar	
	24	Inlet Temperature		97	97	97	°C	
	25	Max Shut-off Differential Pressure		10		bar		
	26	Leakage Class		ANSI IV (standard)				
	27	Power Failure Position	Air Failure Position	FC		FC		
	28							
	CALCULATION DATA	29	Flow Coefficient Cv		---			
30		Sound Pressure Level		dBA				
31		Vendor Flow Coefficient Cv		---	(*)	(*)	(*)	
SELECTED VALVE	32	Type	V-Port Ball					
	33	Cv	Rangeability	(*)	(*)			
	34	Temp. Max	D.P. Max	(*)	(*)			
	35	Leakage Class		(*)				
BODY	36	Sound Pressure Level		(*)				
	37	End Connection: Type	Double Flanged					
	38	Roughness	125-250 AARH					
	39	Size	(*)					
	40	Rating	150#					
	41	Facing	RF					
	42	Flow Action To	(*)					
	43	Bonnet Type	Lubricat.	Standard	(*)			
	44	Jacket & Connection		NA				
	45	Bellow Seal Required		No				
AIR SET	46	Fire Safe Required		No				
	47	TA-LUFT Required		No				
	LIMIT SWITCH	48	Port No.	Full / Red.	Single (*)	(*)		
		49	Plug Type	Character.	(*)	Equal %		
50		Sealing Seat / Plug		Metallic				
51		Balanced	Plug Guide	(*)	(*)			
TRIM	52							
	ACTUATOR	53	Type	Model	Diaphragm	(*)		
		54	Action	Handwh. Loc.	Direct	NA		
		55	Size	Spring Range	(*)	(*)		
56		Travel	Travel Lock	(*)	Yes			
57								
MATERIAL	58	Body / Bonnet	Jacket	A351 CF8	NA			
	59	Plug	Seat	SS316	SS316			
	60	Plug Guides	Stem	(*)	(*)			
	61	Yoke / Housing	Packing	(*)	Graphite			
	62	Bellows						
	POSITIONER	63	Type	Model	E/P Smart	(*)		
		64	Input Signal Range		4-20 mA (HART)			
		65	Action		Direct			
		66	PNEUMATIC CONNECTION	Material	SS316			
		67	Size		1/4"			
68		Mechanical Protection		IP65				
69		Electrical Connection		ISO M20X1.5				
70		Grounding Connection		Internal & External				
SOLENOID VALVE	71	Filter Regulat. & Gauge		Required				
	72	Material	Model	SS316	(*)			
OPTIONS	73	Tag Number						
	74	Quantity	Model					
	75	Tag Number						
PURCHASE	76	Quantity	Model					
	77							
	78	Booster	Air Lock	(*)	(*)			
	79	MR No.						
	80	PO No.	Later					
	81	Manufacturer	(*)					
	82	Model	(*)					
	83	Supplier						

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				Owner Document Number	
				INSTRUMENT SPECIFICATION Control Valve	
0	RC2	11/09/2015	Issued for Approval	Sheet: 149 of 370	
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8500104
				Rev.: 0	

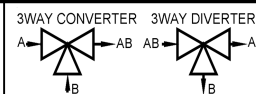
Tag Number : 85-LV -150204A

1. Fluid able to Foul
2. Fluid contains solid in suspension (Slurry service)
3. Max Purging Condition: 6 barg @ 170°C
4. Valve with mechanical block in order to prevent total closure
5. Stream composition: rubber crumbs weight composition 6-10%, max crumbs size 10 mm
6. Alternative design conditions for purging operation: FV 100 °C
7. Type: V- Port valve

				INSTRUMENT SPECIFICATION Control Valve	 شركت جندی شاپور   		
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No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8500104		Rev.: 0

GENERAL	1	Tag Number	P&ID No.	85-LV -150204B	J-85-PID-1502-0			
	2	Service			SLURRY FRM 85-P-1503/1503S TO D-1502			
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)			
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g	7 bar-g	10.5 bar-g	
	5	Line: Number (In)	Size (In)	Schedule (In)	6"-SL-15031A-2DANC-H	6 in	10S	
	6	Line: Number (Out)	Size (Out)	Schedule (Out)				
	7	Line Class	Pipe Material	2DAN	Stainless Steel 304 L			
	8							
DESIGN	9	Pressure Min / Max	Temperature Min / Max	10 bar-g	165 °C			
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3			
	11	Execution	Certification	EEx-ia	IEC/ATEX			
PROCESS CONDITIONS	12	Fluid	Fluid State	Polymer Slurry	N/A or other			
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units	
	14	Inlet Density		960	960	960	kg/m³	
	15						---	
	16							
	17						---	
	18	Inlet Viscosity		0.29	0.29	0.29	mPa.s	
	19	Critical Pressure		220.2	bar-g			
	20	Mass Vaporized	Solids %					
	21	Flow Rate		80000	130426	163200	kg/h	
	22	Inlet Pressure		4.1	3.9	3.6	bar-g	
	23	Pressure Drop		3.3	3	1	bar	
	24	Inlet Temperature		97	97	97	°C	
	25	Max Shut-off Differential Pressure		10	bar			
	26	Leakage Class		ANSI IV (standard)				
	27	Power Failure Position	Air Failure Position	FC	FC			
	28							
	CALCULATION DATA	29	Flow Coefficient Cv		---			
30		Sound Pressure Level		dBA	81	84	56	
31		Vendor Flow Coefficient Cv		---	52	88.8	193	
SELECTED VALVE	32	Type	V-Port Ball					
	33	Cv	Rangeability	1390	≥100:1			
	34	Temp. Max	D.P. Max	165°C	10 bar			
	35	Leakage Class		ANSI IV				
BODY	36	Sound Pressure Level		<85dBA				
	37	End Connection: Type		Double Flanged				
	38	Roughness		125-250 AARH				
	39	Size		6"				
	40	Rating		150#				
	41	Facing		RF				
	42	Flow Action To		Open				
	43	Bonnet Type	Lubricat.	Standard	NA			
	44	Jacket & Connection		NA				
	45	Bellow Seal Required		No				
AIR SET	46	Fire Safe Required		No				
	47	TA-LUFT Required		No				
	LIMIT SWITCH	48	Port No.	Full / Red.	Single	Full		
		49	Plug Type	Character.	V-type Ball	Equal %		
50		Sealing Seat / Plug		Metallic				
51		Balanced	Plug Guide					
TRIM	52							
	53	Type	Model	Diaphragm	31a-SRP			
	54	Action	Handwh. Loc.	Direct	NA			
	55	Size	Spring Range	31a				
ACTUATOR	56	Travel	Travel Lock	0-90°	NA			
	57							
MATERIAL	58	Body / Bonnet	Jacket	A351 CF8	NA			
	59	Plug	Seat	SS316L+H	SS 316			
	60	Plug Guides	Stem		SS316L			
	61	Yoke / Housing	Packing		Graphite			
	62	Bel lows						
	POSITIONER	63	Type	Model	E/P Smart	Note:3.38		
		64	Input Signal Range		4-20 mA (HART)			
		65	Action		Direct			
		66	PNEUMATIC CONNECTION	Material	SS316			
		67	Size		1/4"			
68		Mechanical Protection		IP65				
69		Electrical Connection		ISO M20X1.5				
70		Grounding Connection		Internal & External				
71		Filter Regulat. & Gauge		Required				
72		Material	Model	SS316	Note:3.37			
SOLENOID VALVE	73	Tag Number						
	74	Quantity	Model					
	75	Tag Number						
OPTIONS	76	Quantity	Model					
	77							
	78	Booster	Air Lock					
PURCHASE	79	MR No.						
	80	PO No.						
	81	Manufacturer						
	82	Model						
	83	Supplier						

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Control Valve	
1	M29	31-07-2017	Issued for Purchase		
0	RC2	11-09-2015	Issued for Approval		
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8500104
				Sheet: 151	of 370
				Rev.: 1	

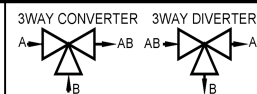
Tag Number : 85-LV -150204B

1. Fluid able to Foul
2. Fluid contains solid in suspension (Slurry service)
3. Max Purging Condition: 6 barg @ 170°C
4. Stream composition: rubber crumbs weight composition 6-10%, max crumbs size 10 mm
5. Alternative design conditions for purging operation: FV 100 °C
6. Type: V- Port valve

				INSTRUMENT SPECIFICATION Control Valve	   		
1	M29	31-07-2017	Issued for Purchase		Sheet 152 of 370		
0	RC2	11-09-2015	Issued for Approval				
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8500104		Rev.: 1

GENERAL	1	Tag Number	P&ID No.	85-LV -150212A	J-85-PID-1502-0		
	2	Service			SLURRY FRM 85-P-1504/1504S TO D-1503		
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)		
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g	7 bar-g	10.5 bar-g
	5	Line: Number (In)	Size (In)	Schedule (In)	4"-SL-15034A-2DANC-H	4 in	10S
	6	Line: Number (Out)	Size (Out)	Schedule (Out)			
	7	Line Class	Pipe Material	2DAN	Stainless Steel 304 L		
	8						
DESIGN	9	Pressure Min / Max	Temperature Min / Max	10 bar-g	165 °C		
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3		
	11	Execution	Certification	EEx-ia	IEC/ATEX		
PROCESS CONDITIONS	12	Fluid	Fluid State	Polymer Slurry	N/A or other		
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units
	14	Inlet Density		948	948	948	kg/m³
	15						---
	16						
	17						---
	18	Inlet Viscosity		0.25	0.25	0.25	mPa.s
	19	Critical Pressure		220.2	bar-g		
	20	Mass Vaporized	Solids %				
	21	Flow Rate		20000	28520	81160	kg/h
	22	Inlet Pressure		3.4 4.5	2.9 4.4	2.6 4.2	bar-g
	23	Pressure Drop		2.3	2.1	1.7	bar
	24	Inlet Temperature		113	113	113	°C
	25	Max Shut-off Differential Pressure			10 bar		
	26	Leakage Class			ANSI IV (standard)		
	27	Power Failure Position	Air Failure Position	FC	FC		
	28						
	CALCULATION DATA	29	Flow Coefficient Cv		---		
30		Sound Pressure Level		dBA			
31		Vendor Flow Coefficient Cv		---	(*)	(*)	(*)
SELECTED VALVE	32	Type	V-Port Ball				
	33	Cv	Rangeability	(*)	(*)		
	34	Temp. Max	D.P. Max	(*)	(*)		
	35	Leakage Class		(*)			
BODY	36	Sound Pressure Level		(*)			
	37	End Connection: Type	Double Flanged				
	38	Roughness	125-250 AARH				
	39	Size	(*)				
	40	Rating	150#				
	41	Facing	RF				
	42	Flow Action To	(*)				
	43	Bonnet Type	Lubricat.	Standard	(*)		
	44	Jacket & Connection		NA			
	45	Bellow Seal Required		No			
POSITIONER	46	Fire Safe Required		No			
	47	TA-LUFT Required		No			
	48	Port No.	Full / Red.	Single (*)	(*)		
	49	Plug Type	Character.	(*)	Equal %		
TRIM	50	Sealing Seat / Plug		Metallic			
	51	Balanced	Plug Guide	(*)	(*)		
	52						
	53	Type	Model	Diaphragm	(*)		
ACTUATOR	54	Action	Handwh. Loc.	Direct	NA		
	55	Size	Spring Range	(*)	(*)		
	56	Travel	Travel Lock	(*)	Yes		
	57						
MATERIAL	58	Body / Bonnet	Jacket	A351 CF8	NA		
	59	Plug	Seat	SS316	SS316		
	60	Plug Guides	Stem	(*)	(*)		
	61	Yoke / Housing	Packing	(*)	Graphite		
	62	Bel lows					
	63	Type	Model	E/P Smart	(*)		
	64	Input Signal Range		4-20 mA (HART)			
	65	Action		Direct			
	66	PNEUMATIC CONNECTION	Material	SS316			
	67	Size		1/4"			
AIR SET	68	Mechanical Protection		IP65			
	69	Electrical Connection		ISO M20X1.5			
	70	Grounding Connection		Internal & External			
	71	Filter Regulat. & Gauge		Required			
LIMIT SWITCH	72	Material	Model	SS316	(*)		
	73	Tag Number					
SOLENOID VALVE	74	Quantity	Model				
	75	Tag Number					
OPTIONS	76	Quantity	Model				
	77						
PURCHASE	78	Booster	Air Lock	(*)	(*)		
	79	MR No.					
	80	PO No.	Later				
	81	Manufacturer	(*)				
	82	Model	(*)				
	83	Supplier					

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Control Valve	
0	RC2	11/09/2015	Issued for Approval	Sheet: 153 of 370	
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8500104
				Rev.: 0	

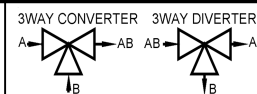
Tag Number : 85-LV -150212A

1. Fluid able to Foul
2. Fluid contains solid in suspension (Slurry service)
3. Max Purging Condition: 6 barg @ 170°C
4. Valve with mechanical block in order to prevent total closure
5. Stream composition: rubber crumbs weight composition 6-10%, max crumbs size 10 mm
6. Alternative design conditions for purging operation: FV 100 °C
7. Type: V- Port valve

				INSTRUMENT SPECIFICATION Control Valve	   		
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No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8500104	Rev.: 0	

GENERAL	1	Tag Number	P&ID No.	85-LV -150212B	J-85-PID-1502-0			
	2	Service			SLURRY FRM 85-P-1504/1504S TO D-1504			
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)			
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g	7 bar-g	10.5 bar-g	
	5	Line: Number (In)	Size (In)	Schedule (In)	6"-SL-15033A-2DANC-H	6 in	10S	
	6	Line: Number (Out)	Size (Out)	Schedule (Out)				
	7	Line Class	Pipe Material	2DAN	Stainless Steel 304 L			
	8							
DESIGN	9	Pressure Min / Max	Temperature Min / Max	10 bar-g	165 °C			
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3			
	11	Execution	Certification	EEx-ia	IEC/ATEX			
PROCESS CONDITIONS	12	Fluid	Fluid State	Polymer Slurry	N/A or other			
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units	
	14	Inlet Density		948	948	948	kg/m³	
	15						---	
	16							
	17						---	
	18	Inlet Viscosity		0.25	0.25	0.25	mPa.s	
	19	Critical Pressure		220.2	bar-g			
	20	Mass Vaporized	Solids %					
	21	Flow Rate		80000	132640	161160	kg/h	
	22	Inlet Pressure		4.4	4	3.8	bar-g	
	23	Pressure Drop		3.4	3	1	bar	
	24	Inlet Temperature		113	113	113	°C	
	25	Max Shut-off Differential Pressure		10	bar			
	26	Leakage Class		ANSI IV (standard)				
	27	Power Failure Position	Air Failure Position	FC	FC			
	28							
	CALCULATION DATA	29	Flow Coefficient Cv		---			
		30	Sound Pressure Level		dBA	82	84	55
		31	Vendor Flow Coefficient Cv		---	51.5	90.9	191
SELECTED VALVE	32	Type	V-Port Ball					
	33	Cv	Rangeability	1390	≥100:1			
	34	Temp. Max	D.P. Max	165°C	10 bar			
	35	Leakage Class		ANSI IV				
BODY	36	Sound Pressure Level		<85dBA				
	37	End Connection: Type		Double Flanged				
	38	Roughness		125-250 AARH				
	39	Size		6"				
	40	Rating		150#				
	41	Facing		RF				
	42	Flow Action To		Open				
	43	Bonnet Type	Lubricat.	Standard	NA			
	44	Jacket & Connection		NA				
	45	Bellow Seal Required		No				
AIR SET	46	Fire Safe Required		No				
	47	TA-LUFT Required		No				
	LIMIT SWITCH	48	Port No.	Full / Red.	Single	Full		
		49	Plug Type	Character.	V-type Ball	Equal %		
50		Sealing Seat / Plug		Metallic				
51		Balanced	Plug Guide					
TRIM	52							
	53	Type	Model	Diaphragm	31a-SRP			
	54	Action	Handwh. Loc.	Direct	NA			
	55	Size	Spring Range	31a				
ACTUATOR	56	Travel	Travel Lock	0-90°	NA			
	57							
	PURCHASE	58	Body / Bonnet	Jacket	A351 CF8	NA		
59		Plug	Seat	SS316L+H	SS 316			
60		Plug Guides	Stem		SS316L			
61		Yoke / Housing	Packing		Graphite			
62		Bel lows						
63		Type	Model	E/P Smart	Note:3.38			
64		Input Signal Range		4-20 mA (HART)				
65		Action		Direct				
66		PNEUMATIC CONNECTION	Material	SS316				
67		Size		1/4"				
SOLENOID VALVE	68	Mechanical Protection		IP65				
	69	Electrical Connection		ISO M20X1.5				
	70	Grounding Connection		Internal & External				
	71	Filter Regulat. & Gauge		Required				
OPTIONS	72	Material	Model	SS316	Note:3.37			
	73	Tag Number						
	74	Quantity	Model					
	75	Tag Number						
3WAY CONVERTER 3WAY DIVERTER	76	Quantity	Model					
	77							
	78	Booster	Air Lock					
	79	MR No.						
	80	PO No.						
	81	Manufacturer						
	82	Model						
	83	Supplier						

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				Owner Document Number	
				INSTRUMENT SPECIFICATION Control Valve	
1	M29	31-07-2017	Issued for Purchase		
0	RC2	11-09-2015	Issued for Approval		
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8500104
				Sheet: 155	of 370
				Rev.: 1	

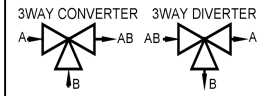
Tag Number : 85-LV -150212B

1. Fluid able to Foul
2. Fluid contains solid in suspension (Slurry service)
3. Max Purging Condition: 6 barg @ 170°C
4. Stream composition: rubber crumbs weight composition 6-10%, max crumbs size 10 mm
5. Alternative design conditions for purging operation: FV 100 °C
6. Type: V- Port valve

				INSTRUMENT SPECIFICATION Control Valve			
					  		
1	M29	31-07-2017	Issued for Purchase		Sheet 156 of 370		
0	RC2	11-09-2015	Issued for Approval				
No.	By	Date	Revision		Code: 651	Dwg. No.: 3863-KK-SE-8500104	
						Rev.: 1	

GENERAL	1	Tag Number	P&ID No.	85-LV -150304A		J-85-PID-1503-0		
	2	Service			SLURRY FRM 85-P1505/1505S TO D-1505			
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)			
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g		10.5 bar-g	
	5	Line: Number (In)	Size (In)	Schedule (In)	4"-SL-15065A-2DANC-H		10S	
	6	Line: Number (Out)	Size (Out)	Schedule (Out)				
	7	Line Class	Pipe Material	2DAN		Stainless Steel 304 L		
	8							
DESIGN	9	Pressure Min / Max	Temperature Min / Max	9.5 bar-g		165 °C		
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3			
	11	Execution	Certification	EEx-ia		IEC/ATEX		
PROCESS CONDITIONS	12	Fluid	Fluid State	Polymer Slurry		N/A or other		
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units	
	14	Inlet Density		945	945	945	kg/m³	
	15						---	
	16							
	17						---	
	18	Inlet Viscosity		0.25	0.25	0.25	mPa.s	
	19	Critical Pressure		220.2		bar-g		
	20	Mass Vaporized	Solids %					
	21	Flow Rate		20000	28853	80650	kg/h	
	22	Inlet Pressure		2.7	4.1	2.5	4	bar-g
	23	Pressure Drop		1.7	1.5	1.1	bar	
	24	Inlet Temperature		117	117	117	°C	
	25	Max Shut-off Differential Pressure			9.5 bar			
	26	Leakage Class			ANSI IV (standard)			
	27	Power Failure Position	Air Failure Position	FC		FC		
	28							
	CALCULATION DATA	29	Flow Coefficient Cv			---		
30		Sound Pressure Level			dBA			
31		Vendor Flow Coefficient Cv			---			
SELECTED VALVE	32	Type	V-Port Ball					
	33	Cv	Rangeability	(*)	(*)			
	34	Temp. Max	D.P. Max	(*)	(*)			
	35	Leakage Class			(*)			
BODY	36	Sound Pressure Level			(*)			
	37	End Connection: Type	Double Flanged					
	38	Roughness	125-250 AARH					
	39	Size	(*)					
	40	Rating	150#					
	41	Facing	RF					
	42	Flow Action To	(*)					
	43	Bonnet Type	Lubricat.	Standard	(*)			
	44	Jacket & Connection			NA			
	45	Bellow Seal Required			No			
AIR SET	46	Fire Safe Required			No			
	47	TA-LUFT Required			No			
	48	Port No.	Full / Red.	Single (*)	(*)			
	49	Plug Type	Character.	(*)	Equal %			
TRIM	50	Sealing Seat / Plug			Metallic			
	51	Balanced	Plug Guide	(*)	(*)			
	52							
	53	Type	Model	Diaphragm	(*)			
ACTUATOR	54	Action	Handwh. Loc.	Direct	NA			
	55	Size	Spring Range	(*)	(*)			
	56	Travel	Travel Lock	(*)	Yes			
	57							
	58	Body / Bonnet	Jacket	A351 CF8	NA			
MATERIAL	59	Plug	Seat	SS316	SS316			
	60	Plug Guides	Stem	(*)	(*)			
	61	Yoke / Housing	Packing	(*)	Graphite			
	62	Bellows						
	63	Type	Model	E/P Smart	(*)			
	64	Input Signal Range			4-20 mA (HART)			
	65	Action			Direct			
	66	PNEUMATIC CONNECTION	Material	SS316				
	67	Size	1/4"					
	68	Mechanical Protection			IP65			
POSITIONER	69	Electrical Connection			ISO M20X1.5			
	70	Grounding Connection			Internal & External			
	71	Filter Regulat. & Gauge			Required			
	72	Material	Model	SS316	(*)			
LIMIT SWITCH	73	Tag Number						
	74	Quantity	Model					
SOLENOID VALVE	75	Tag Number						
	76	Quantity	Model					
OPTIONS	77							
	78	Booster	Air Lock	(*)	(*)			
PURCHASE	79	MR No.						
	80	PO No.			Later			
	81	Manufacturer			(*)			
	82	Model			(*)			
	83	Supplier						
	84							

Notes: See notes



	JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)	  
INSTRUMENT SPECIFICATION Control Valve		Owner Document Number
0	RC2	11/09/2015
Nr.	By	Date
Revision		Code: 651
Doc. No.: 3863-KK-SE-8500104		Rev.: 0

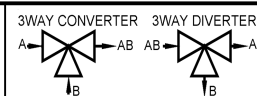
Tag Number : 85-LV -150304A

1. Fluid able to Foul
2. Fluid contains solid in suspension (Slurry service)
3. Max Purging Condition: 6 barg @ 170°C
4. Valve with mechanical block in order to prevent total closure
5. Stream composition: rubber crumbs weight composition 6-10%, max crumbs size 10 mm
6. Alternative design conditions for purging operation: FV 100 °C
7. Type: V- Port valve

				INSTRUMENT SPECIFICATION Control Valve	 شركت جندی شاپور   		
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No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8500104		Rev.: 0

GENERAL	1	Tag Number	P&ID No.	85-LV -150304B	J-85-PID-1503-0		
	2	Service			SLURRY FRM 85-P1505/1505S TO D-1504		
	3	Allowable Sound Pressure Level (dBA)			< 85 dB(A)		
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 bar-g	7 bar-g	10.5 bar-g
	5	Line: Number (In)	Size (In)	Schedule (In)	6"-SL-15101A-2DANC-H	6 in	10S
	6	Line: Number (Out)	Size (Out)	Schedule (Out)			
	7	Line Class	Pipe Material	2DAN	Stainless Steel 304 L		
	8						
DESIGN	9	Pressure Min / Max	Temperature Min / Max	9.5 bar-g	165 °C		
HAZARDOUS AREA	10	Classification			Zone 2, Gr. IIA & IIB, T3		
	11	Execution	Certification	EEx-ia	IEC/ATEX		
PROCESS CONDITIONS	12	Fluid	Fluid State	Polymer Slurry	N/A or other		
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	
	14	Inlet Density		945	945	945	kg/m³
	15						---
	16						
	17						---
	18	Inlet Viscosity		0.25	0.25	0.25	mPa.s
	19	Critical Pressure		220.2	bar-g		
	20	Mass Vaporized	Solids %				
	21	Flow Rate		80000	131797	160650	kg/h
	22	Inlet Pressure		4.2	3.9	3.6	bar-g
	23	Pressure Drop		4	3.7	1.3	bar
	24	Inlet Temperature		117	117	117	°C
	25	Max Shut-off Differential Pressure		9.5	bar		
	26	Leakage Class		ANSI IV (standard)			
	27	Power Failure Position	Air Failure Position	FC	FC		
	28						
	CALCULATION DATA	29	Flow Coefficient Cv		---		
30		Sound Pressure Level		dBA	81	84	73
31		Vendor Flow Coefficient Cv		---	47.6	81.5	168
SELECTED VALVE	32	Type	V-Port Ball				
	33	Cv	Rangeability	809	≥100:1		
	34	Temp. Max	D.P. Max	165°C	9.5 bar		
	35	Leakage Class		ANSI IV			
BODY	36	Sound Pressure Level		<85dBA			
	37	End Connection: Type		Double Flanged			
	38	Roughness		125-250 AARH			
	39	Size		6"			
	40	Rating		150#			
	41	Facing		RF			
	42	Flow Action To		Open			
	43	Bonnet Type	Lubricat.	Standard	NA		
	44	Jacket & Connection		NA			
	45	Bellow Seal Required		No			
	46	Fire Safe Required		No			
	47	TA-LUFT Required		No			
TRIM	48	Port No.	Full / Red.	Single	Full		
	49	Plug Type	Character.	V-type Ball	Equal %		
	50	Sealing Seat / Plug		Metallic			
	51	Balanced	Plug Guide				
	52						
ACTUATOR	53	Type	Model	Diaphragm	31a-SRP		
	54	Action	Handwh. Loc.	Direct	NA		
	55	Size	Spring Range	31a			
	56	Travel	Travel Lock	0-90°	NA		
	57						
MATERIAL	58	Body / Bonnet	Jacket	A351 CF8	NA		
	59	Plug	Seat	SS316L+H	SS316		
	60	Plug Guides	Stem		SS316L		
	61	Yoke / Housing	Packing		Graphite		
	62	Bellows					
	63	Type	Model	E/P Smart	Note:3.38		
	64	Input Signal Range		4-20 mA (HART)			
	65	Action		Direct			
	66	PNEUMATIC CONNECTION	Material	SS316			
	67	Size		1/4"			
POSITIONER	68	Mechanical Protection		IP65			
	69	Electrical Connection		ISO M20X1.5			
	70	Grounding Connection		Internal & External			
	71	Filter Regulat. & Gauge		Required			
	72	Material	Model	SS316	Note: 3.37		
AIR SET	73	Tag Number					
	74	Quantity	Model				
LIMIT SWITCH	75	Tag Number					
	76	Quantity	Model				
SOLENOID VALVE	77						
	78	Booster	Air Lock				
OPTIONS	79	MR No.					
	80	PO No.					
	81	Manufacturer					
	82	Model					
	83	Supplier					
	84						

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Control Valve	
1	M29	31-07-2017	Issued for Purchase		
0	RC2	11-09-2015	Issued for Approval		
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8500104
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				Rev.: 1	

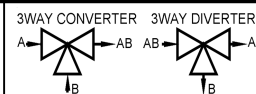
Tag Number : 85-LV -150304B

1. Fluid able to Foul
2. Fluid contains solid in suspension (Slurry service)
3. Max Purging Condition: 6 barg @ 170°C
4. Stream composition: rubber crumbs weight composition 6-10%, max crumbs size 10 mm
5. Alternative design conditions for purging operation: FV 100 °C
6. Type: V- Port valve

				INSTRUMENT SPECIFICATION Control Valve	   	
1	M29	31-07-2017	Issued for Purchase		Sheet 160 of 370	
0	RC2	11-09-2015	Issued for Approval			
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8500104	Rev.: 1

GENERAL	1	Tag Number	P&ID No.	85-PV -111510		J-85-PID-1115-0		
	2	Service		FR 85-P-1110/S TO 85-D-1113				
	3	Allowable Sound Pressure Level (dBA)		< 85 dB(A)				
	4	Air Supply Pressure: Min / Nor / Max / Design		5.5 bar-g		7 bar-g	10.5 bar-g	
	5	Line: Number (In)	Size (In)	Schedule (In)	3"-AD-11182A-2DANC-N		3 in 10S	
	6	Line: Number (Out)	Size (Out)	Schedule (Out)				
	7	Line Class	Pipe Material	2DAN		Stainless Steel 304 L		
	8							
DESIGN	9	Pressure Min / Max	Temperature Min / Max	7.5 bar-g		85 °C		
HAZARDOUS AREA	10	Classification		Zone 2, Gr. IIA & IIB, T3				
	11	Execution	Certification	EEx-ia		IEC/ATEX		
PROCESS CONDITIONS	12	Fluid	Fluid State	Additive CaStEm		Liquid		
	13			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units	
	14	Inlet Density		1050	1050	1050	kg/m³	
	15	Specific Gravity					---	
	16	Inlet Vapour Pressure		-1	-1	-1	bar-g	
	17						---	
	18	Inlet Viscosity		350	350	350	mPa.s	
	19	Critical Pressure		bar-g				
	20	Mass Vaporized	Solids %					
	21	Flow Rate		900	1300	2100	kg/h	
	22	Inlet Pressure		1.9	1.9	1.8	bar-g	
	23	Pressure Drop		0.5	0.5	0.3	bar	
	24	Inlet Temperature		40	40	40	°C	
	25	Max Shut-off Differential Pressure		7.5 bar				
	26	Leakage Class		ANSI IV (standard)				
	27	Power Failure Position	Air Failure Position	FO		FO		
	CALCULATION DATA	28						
		29	Flow Coefficient Cv		---	2.62	3.52	7.05
30		Sound Pressure Level		dBA	54.1	55.4	54.	
SELECTED VALVE	31	Vendor Flow Coefficient Cv		---	(*)	(*)	(*)	
	32	Type	V-Port Ball					
	33	Cv	Rangeability	(*)	(*)			
	34	Temp. Max	D.P. Max	(*)	(*)			
	35	Leakage Class		(*)				
	36	Sound Pressure Level		(*)				
BODY	37	End Connection: Type	Double Flanged					
	38	Roughness	125-250 AARH					
	39	Size	(*)					
	40	Rating	150#					
	41	Facing	RF					
	42	Flow Action To	(*)					
	43	Bonnet Type	Lubricat.	Standard	(*)			
	44	Jacket & Connection		NA				
	45	Bellow Seal Required		No				
	46	Fire Safe Required		No				
TRIM	47	TA-LUFT Required		No				
	48	Port No.	Full / Red.	Single (*)	(*)			
	49	Plug Type	Character.	(*)	Equal %			
	50	Sealing Seat / Plug		Metallic				
	51	Balanced	Plug Guide	(*)	(*)			
	52							
ACTUATOR	53	Type	Model	Diaphragm	(*)			
	54	Action	Handwh. Loc.	Direct	NA			
	55	Size	Spring Range	(*)	(*)			
	56	Travel	Travel Lock	(*)	NA			
	57							
MATERIAL	58	Body / Bonnet	Jacket	A351 CF8	NA			
	59	Plug	Seat	SS316	SS316			
	60	Plug Guides	Stem	(*)	(*)			
	61	Yoke / Housing	Packing	(*)	Graphite			
	62	Bel lows						
	63	Type	Model	E/P Smart	(*)			
	64	Input Signal Range	4-20 mA (HART)					
	65	Action	Direct					
	66	PNEUMATIC CONNECTION	Material	SS316				
	67	Size	1/4"					
POSITIONER	68	Mechanical Protection	IP65					
	69	Electrical Connection	ISO M20X1.5					
	70	Grounding Connection	Internal & External					
	71	Filter Regulat. & Gauge	Required					
	72	Material	Model	SS316	(*)			
AIR SET	73	Tag Number						
	74	Quantity	Model					
LIMIT SWITCH	75	Tag Number						
	76	Quantity	Model					
SOLENOID VALVE	77							
	78	Booster	Air Lock	(*)	(*)			
OPTIONS	79	MR No.						
	80	PO No.	Later					
	81	Manufacturer	(*)					
	82	Model	(*)					
	83	Supplier						
	84							

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Control Valve	
0	RC2	11/09/2015	Issued for Approval	Sheet: 223 of 370	
Nr.	By	Date	Revision	Code: 651	Doc. No.: 3863-KK-SE-8500104
				Rev.: 0	

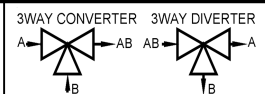
Tag Number : 85-PV -111510

1. Fluid able to Foul
2. Fluid contains solid in suspension
3. Max Purging Condition: 5 barg @ 50°C
4. Stream composition: Castem emulsion at 50% in water
5. Type: V- Port valve

				INSTRUMENT SPECIFICATION Control Valve	 شركت جندی شاپور   		
0	RC2	11/09/2015	Issued for Approval		Sheet 224	of 370	
No.	By	Date	Revision	Code: 651	Dwg. No.: 3863-KK-SE-8500104		Rev.: 0

GENERAL	1	Tag Number	P&ID No.	85-EVX -000603	J-85-UDD-0006-0		
	2	Service			LPS DISTRIBUTION HEADER		
	3	Allowable Sound Pressure Level (dBA)			<85 dB(A)		
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 Barg	7 Barg	10.5 Barg
	5	Fire-Safe Execution	Antistatic Device	NA	Yes		
	6	Line: Number (In)	Size (In)	Schedule (In)	6"-LPS-19192A-2ABNA-H	6 in	40
	7	Line: Number (Out)	Size (Out)	Schedule (Out)			
	8	Line Class	Pipe Material	2ABN	Carbon Steel		
	9	TA-Luft Certification			Not Required		
DESIGN	10	Pressure Min / Max	Temperature Min / Max	7.5 bar-g	205 °C		
HAZARDOUS AREA	11	Classification			Zone 2, Temperature Class T4, Gas Group IIC		
	12	Execution	Certification	EE x (ia)	IEC / ATEX		
PROCESS CONDITIONS	13	Fluid	Fluid State	Low Pressure Steam	Gas/Vapor		
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units
	15	Inlet Density			3.08	kg/m³	
	16	Molecular Mass				---	
	17	Inlet Specific Heats Ratio Cp/Cv				---	
	18	Inlet Compressibility Factor				---	
	19	Inlet Viscosity			0.015	mPa-s	
	20	Solids %					
	21	Flow Rate			3500	kg/h	
	22	Inlet Pressure			5	bar-g	
	23	Pressure Drop			0.05	bar	
	24	Inlet Temperature			170	°C	
	25	Max Shut-off Differential Pressure			8.5	bar	
	26	Leakage Class			ANSI V		
	27	Power Failure Position	Air Failure Position	Fail Locked	Fail Locked		
	28	Travel Time			6 Sec		
	CALCULATION DATA	29	Flow Coefficient Cv				---
30		Sound Pressure Level				dBA	
SELECTED VALVE	31	Type	Ball				
	32	Cv	Leakage Class		ANSI V		
	33	Temper. Max	DP Max	205°C	8.5 barg		
	34	Sound Pressure Level			<85dBA		
	35						
BODY	36	End Connection: Type	Flanged				
	37	Roughness	125-250 AARH				
	38	Size	6"				
	39	Rating	150#				
	40	Facing	RF				
	41	Flow Action To	NA				
	42	Bonnet Type	Lubric.	STD	NA		
TRIM	43	Jacket and Connection	NA				
	44	Port	Full Bore				
	45	Plug Type	Ball				
ACTUATOR	46	Sealing Seat / Plug	Metallic				
	47	Plug Guide	Trunnion Ball				
	48	Type	Model	Piston			
	49	Piston Acting	Single Effect Pneumatic				
	50	Open / Close Time	6 sec				
	51	Handwh. Loc.	Not Required				
	52	Size	Spring Range	300S	4Y12		
	53	Travel	Travel Lock	0 - 90°	NA		
	54	PNEUMATIC CONNECTION	Material	SS 316			
	55	CONNECTION	Size	1/4"			
56	Execution						
57	Model						
MATERIAL	57	Body / Bonnet	Jacket	A216 WCB	NA		
	58	Plug	Seat	SS316+Co C	SS316+Co C		
	59	Sealing	Packing	Graphite	Flex Graphite		
	60	Plug Guides			SS 316		
	61						
	62	Filter Regulator & Gauge			Required		
	63	Material	Model	SS316	Note-3.29		
	64	Tag Number	85-EZSHX/LX-180603				
AIR SET	65	Quantity	Model	2	Note-3.30		
	66	Tag Number	85-EYX-180603				
LIMIT SWITCH	67	Quantity	Model	1	Note 3.31		
	68	Reset	Auto Reset				
SOLENOID VALVE	69	Tag Number	NA				
	70	Model	NA				
PNEUMATIC DISTRIBUTOR	71						
	72	Partial Stroke Device					
	73	Quick Exhaust					
	74	Air Lock					
	75	Actuator fire Proofing					
	76	Thermal Fuse			Yes		
	77						
	78						
OPTIONS	79	MR No.					
	80	PO No.					
	81	Manufacturer					
	82	Model					
	83	Supplier					
PURCHASE	84						
	85						
	86						
	87						
	88						

Notes: See notes



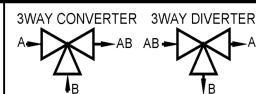
		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Shut-off Valve	
1	M29	26-06-2017	Issued for Purchase		
0	DD4	13-08-2015	Issued for Approval		
Nr.	By	Date	Revision	Code: 655	Doc. No.: 3863-KK-SE-8500115
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1. Volume Tank (85-TK-180603), Pressure Switch (PSL180603), PSV (PSV180603) shall be provided by on off valve vendor.
ACTUATOR SINGLE EFFECT TYPE (CYLINDER)
2. Fluid Properties
Fluid is able to Condensate.
3. Alternate Design Condition FV@205 DegC

				INSTRUMENT SPECIFICATION Shut-off Valve		
					  	
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GENERAL	1	Tag Number	P&ID No.	85-EVX -000604	J-85-UDD-0006-0		
	2	Service			LPS DISTRIBUTION HEADER		
	3	Allowable Sound Pressure Level (dBA)			<85 dBA)		
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 Barg	7 Barg	10.5 Barg
	5	Fire-Safe Execution	Antistatic Device	NA	Yes		
	6	Line: Number (In)	Size (In)	Schedule (In)	6"-LPS-19193A-2ABNA-H	6 in	40
	7	Line: Number (Out)	Size (Out)	Schedule (Out)			
	8	Line Class	Pipe Material	2ABN	Carbon Steel		
	9	TA-Luft Certification			Not Required		
DESIGN	10	Pressure Min / Max	Temperature Min / Max	7.5 bar-g	205 °C		
HAZARDOUS AREA	11	Classification			Zone 2, Temperature Class T4, Gas Group IIC		
	12	Execution	Certification	EE x (ia)	IEC / ATEX		
PROCESS CONDITIONS	13	Fluid	Fluid State	Low Pressure Steam	Gas/Vapor		
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units
	15	Inlet Density				3.08	kg/m³
	16	Molecular Mass					---
	17	Inlet Specific Heats Ratio Cp/Cv					---
	18	Inlet Compressibility Factor					---
	19	Inlet Viscosity				0.015	mPa-s
	20	Solids %					
	21	Flow Rate				3500	kg/h
	22	Inlet Pressure				5	bar-g
	23	Pressure Drop				0.05	bar
	24	Inlet Temperature				170	°C
	25	Max Shut-off Differential Pressure			8.5	bar	
	26	Leakage Class			ANSI V		
	27	Power Failure Position	Air Failure Position	Fail Locked	Fail Locked		
	28	Travel Time			6 Sec		
	CALCULATION DATA	29	Flow Coefficient Cv				
30		Sound Pressure Level					dBA
SELECTED VALVE	31	Type	Ball				
	32	Cv	Leakage Class		ANSI V		
	33	Temper. Max	DP Max	205°C	8.5 barg		
	34	Sound Pressure Level			<85dBA		
	35						
BODY	36	End Connection: Type	Flanged				
	37	Roughness	125-250 AARH				
	38	Size	6"				
	39	Rating	150#				
	40	Facing	RF				
	41	Flow Action To	NA				
	42	Bonnet Type	Lubric.	STD	NA		
TRIM	43	Jacket and Connection	NA				
	44	Port	Full Bore				
	45	Plug Type	Ball				
ACTUATOR	46	Sealing Seat / Plug	Metallic				
	47	Plug Guide	Trunnion Ball				
	48	Type	Model	Piston			
	49	Piston Acting	Single Effect Pneumatic				
	50	Open / Close Time	6 sec				
	51	Handwh. Loc.	Not Required				
	52	Size	Spring Range	300S	4Y12		
	53	Travel	Travel Lock	0 - 90°	NA		
	54	PNEUMATIC CONNECTION	Material	SS 316			
	55	CONNECTION	Size	1/4"			
56	Execution						
57	Model	RTPM 00610/300S4Y12NI					
MATERIAL	57	Body / Bonnet	Jacket	A216 WCB	NA		
	58	Plug	Seat	SS316+Co C	SS316+Co C		
	59	Sealing	Packing	Graphite	Flex Graphite		
	60	Plug Guides			SS 316		
	61						
	62	Filter Regulator & Gauge			Required		
	63	Material	Model	SS316	Note-3.29		
	64	Tag Number	85-EZSHX/LX-180604				
AIR SET	65	Quantity	Model	2	Note-3.30		
	66	Tag Number	85-EYX-180604				
LIMIT SWITCH	67	Quantity	Model	1	Note 3.31		
	68	Reset	Auto Reset				
SOLENOID VALVE	69	Tag Number	NA				
	70	Model	NA				
PNEUMATIC DISTRIBUTOR	71						
	72	Partial Stroke Device					
	73	Quick Exhaust					
	74	Air Lock					
	75	Actuator fire Proofing					
	76	Thermal Fuse			Yes		
	77						
	78						
OPTIONS	79	MR No.					
	80	PO No.					
	81	Manufacturer					
	82	Model					
	83	Supplier					
PURCHASE	84						
	85						
	86						
	87						
	88						

Notes: See notes



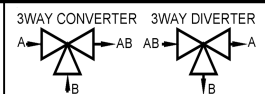
		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				Owner Document Number	
				INSTRUMENT SPECIFICATION Shut-off Valve	
1	M29	26-06-2017	Issued for Purchase		
0	DD4	13-08-2015	Issued for Approval		
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1. Volume Tank (85-TK-180604), Pressure Switch (PSL180601), PSV (PSV180604) shall be provided by on off valve vendor.
ACTUATOR SINGLE EFFECT TYPE (CYLINDER)
2. Fluid Properties
Fluid is able to Condensate.
3. Alternate Design Condition FV@205 DegC

				INSTRUMENT SPECIFICATION Shut-off Valve	   	
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GENERAL	1	Tag Number	P&ID No.	85-EVX -000607	J-85-UDD-0006-0		
	2	Service			LPS DISTRIBUTION HEADER		
	3	Allowable Sound Pressure Level (dBA)			<85 dB(A)		
	4	Air Supply Pressure: Min / Nor / Max / Design			5.5 Barg	7 Barg	10.5 Barg
	5	Fire-Safe Execution	Antistatic Device	NA	Yes		
	6	Line: Number (In)	Size (In)	Schedule (In)	6"-LPS-19196A-2ABNA-H	6 in	40
	7	Line: Number (Out)	Size (Out)	Schedule (Out)			
	8	Line Class	Pipe Material	2ABN	Carbon Steel		
	9	TA-Luft Certification			Not Required		
DESIGN	10	Pressure Min / Max	Temperature Min / Max	7.5 bar-g	205 °C		
HAZARDOUS AREA	11	Classification			Zone 2, Temperature Class T4, Gas Group IIC		
	12	Execution	Certification	EE x (ia)	IEC / ATEX		
PROCESS CONDITIONS	13	Fluid	Fluid State	Low Pressure Steam	Gas/Vapor		
	14			@ Min. Flow	@ Norm. Flow	@ Max. Flow	Units
	15	Inlet Density				3.08	kg/m³
	16	Molecular Mass					---
	17	Inlet Specific Heats Ratio Cp/Cv					---
	18	Inlet Compressibility Factor					---
	19	Inlet Viscosity				0.015	mPa-s
	20	Solids %					
	21	Flow Rate				2000	kg/h
	22	Inlet Pressure				5	bar-g
	23	Pressure Drop				0.05	bar
	24	Inlet Temperature				170	°C
	25	Max Shut-off Differential Pressure			8.5	bar	
	26	Leakage Class			ANSI V		
	27	Power Failure Position	Air Failure Position	Fail Locked	Fail Locked		
	28	Travel Time		6 Sec			
	CALCULATION DATA	29	Flow Coefficient Cv				
30		Sound Pressure Level					dBA
SELECTED VALVE	31	Type	Ball				
	32	Cv	Leakage Class		ANSI V		
	33	Temper. Max	DP Max	205°C	8.5 barg		
	34	Sound Pressure Level		<85dBA			
	35						
BODY	36	End Connection: Type	Flanged				
	37	Roughness	125-250 AARH				
	38	Size	6"				
	39	Rating	150#				
	40	Facing	RF				
	41	Flow Action To	NA				
	42	Bonnet Type	Lubric.	STD	NA		
TRIM	43	Jacket and Connection	NA				
	44	Port	Full Bore				
	45	Plug Type	Ball				
ACTUATOR	46	Sealing Seat / Plug	Metallic				
	47	Plug Guide	Trunnion Ball				
	48	Type	Model	Piston			
	49	Piston Acting		Single Effect Pneumatic			
	50	Open / Close Time		6 sec			
	51	Handwh. Loc.		Not Required			
	52	Size	Spring Range	300S	4Y12		
	53	Travel	Travel Lock	0 - 90°	NA		
	54	PNEUMATIC CONNECTION	Material	SS 316			
	55	CONNECTION	Size	1/4"			
56	Execution						
57	Model		RTPM 00610/300S4Y12NI				
MATERIAL	57	Body / Bonnet	Jacket	A216 WCB	NA		
	58	Plug	Seat	SS316+Co C	SS316+Co C		
	59	Sealing	Packing	Graphite	Flex Graphite		
	60	Plug Guides		SS 316			
	61						
AIR SET	62	Filter Regulator & Gauge		Required			
	63	Material	Model	SS316	Note-3.29		
LIMIT SWITCH	64	Tag Number		85-EZSHX/LX-180607			
	65	Quantity	Model	2	Note-3.30		
SOLENOID VALVE	66	Tag Number		85-EYX-180607			
	67	Quantity	Model	1	Note 3.31		
PNEUMATIC DISTRIBUTOR	68	Reset		Auto Reset			
	69	Tag Number		NA			
OPTIONS	70	Model		NA			
	71						
	72	Partial Stroke Device					
	73	Quick Exhaust					
	74	Air Lock					
	75	Actuator fire Proofing					
	76	Thermal Fuse		Yes			
	77						
PURCHASE	78						
	79	MR No.					
	80	PO No.					
	81	Manufacturer					
	82	Model					
	83	Supplier					

Notes: See notes



		JAM ABS & RUBBERS PLANT (BANDAR ASSALUYEH)			
				 	
				Owner Document Number	
				INSTRUMENT SPECIFICATION Shut-off Valve	
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1. Volume Tank 85-TK-180607, Pressure switch (PSL180602), PSV (PSV180602) shall be provided by on off valve vendor.
ACTUATOR SINGLE EFFECT TYPE (CYLINDER)
2. Fluid Properties
Fluid is able to Condensate.
3. Alternate Design Condition FV@205 DegC

				INSTRUMENT SPECIFICATION Shut-off Valve	   	
1	M29	26-06-2017	Issued for Purchase		Sheet 41	of 405
0	DD4	13-08-2015	Issued for Approval			
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