



Vendor	<b>ABT 360 KT/Y PP PLANT Project</b>			Owner
	PSV data sheet			
	Vendor's Doc. No.: 23249-28	Rev.: 00		
	PPEC Doc. No.: L03-RE037-IN-DSH-004			

**PPEC REQ. NO. : L03-RE037-IN-DSH-004**

**ITEM NO. :**

**TOTAL PAGES : 06**

- **NO COMMENTS** : Documents/Drawings Were Checked By PPEC And Further Step Can Be Followed.
- **COMMENTED AS MARKED:** Documents/Drawings Were Checked By PPEC And Marked Comments Must Be Considered By Vendor. Vendor Shall Revise Documents/Drawing As Per Comments And The New Revision Of Documents/Drawings Must Be Revised Prior To Fabrication.
- **REJECTED:** Documents/Drawings Were Checked And It Is Not In Comply With Purchase Requisition Requirements.
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PPEC review & comments does not absolve the vendor of the responsibility for the corrected design, manufacturing and operation of the equipment

00	10-06-2025	Issue for Engineering	L.K.	S.K.	J.J.	
REV.	DATE	Description	Prepared by	Checked by	Approved by	Authorized by

Vendor	ABT 360 KT/Y PP PLANT		Contractor (DEC)	Owner
	PSV data sheet			
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PAGE NO.		CHANGE INDEX DURING FORMAL ISSUE						REASON OF LATEST CHANGE
		FIRST ISSUE	SECOND ISSUE	THIRTH ISSUE	FOURTH ISSUE	FIFTH ISSUE	SIXTH ISSUE	
		REV.00	REV.01	REV.02	REV.03	REV.04	REV.05	
1		X						
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3		X						
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Please implement this PSV's tag numbers to P&ID

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GENERAL	1	Tag Number		PSV-PK6801-01, PSV-PK6801-02	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		23249-03	
	4	Location		Pulsation damper 1st stage inlet	
	5	Nozzle		Full nozzle	
	6	Design type		Safety	
	7	Conv., Bellows, Pilot op.		Conventional type	
	8	Bonnet Type		Closed	
	9	Bonnet connection		Bolted	
PROCESS CONDITIONS	10	Fluid	State	Mixed gas (see notes)	Dry gas
	11	Pressure	Inlet Max.	2.8 bar(g)	3.5 bar(g)
	12	Temperature	Norm. Max.	0 °C	60 °C
	13	Design	Press. Temp.	5 bar(g)	75 °C
	14	Ambient Temp.	Min. Max.	1 °C	55 °C
BASIS AND SELECTION	15	Flow		1100-1200 kg/h	
	16	Set Pressure		5 bar(g)	
	17	Molecular Weight	Oper. Sp. Gr.	Case 1: 42,56 kg/kmol Case 2: 42,124 kg/kmol	1
	18	Back Pres. (bar(g))		0 bar(g)	
	19	Allowable Overpressure (%)		10 %	
	20	Compressibility Factor (Z)		1	
	21	Ratio of Specific Heat (Cp/Cv)		1.4	
	22	Operating Viscosity (cP)		-	
	23	Barometric Pressure		1,013 bar(a)	
	24	Max. Allowable Relief Pressure		6,513 bar(a)	
	25	Design Code		API 520, API 521	
	26	Size Basis		Blocked discharge	
	27	Calculated Area (sq.mm)		261,89 mm²	
	28	Selected Area (sq.mm)		397,61 mm²	
	29	Orifice Designation		G	
CONNECTIONS	30				
	31	Inlet Size	Outlet Size	1 1/2"	3"
	32	Inlet Connection	Outlet Conn.	RF	RF
	33	Inlet Rating	Outlet Rating	150#	150#
MATERIAL	34				
	35				
	36	Body and Bonnet		Carbon steel	
	37	Seat and Disc		To be advised by supplier	
	38	Guide and Rings		To be advised by supplier	
	39	Spring		To be advised by supplier	
	40	Nozzle		To be advised by supplier	
	41				
OPTIONS	42				
	43	Lever: Plain or Packed		N/A	
	44	Test Gag		N/A	
	45				
CERTIFICATES	46				
	47				
	48	3.1 Material certificate		Yes	
	49	Calibration certificate		No	
CALCULATIONS	50	Leakage test acc to API STD 527		No	
	51	Functional test		No	
	52	Sizing calculation		Yes	
	53				
PURCHASE	54				
	55	Manufacturer		According to approved vendor list	
	56	Model		Supplier to advise	
	57				

Max Back Pressure (barg) 0.6


<b>Note</b>			
<b>Case 1:</b>		<b>Case 2:</b>	
- 77% propylene		- 70,2% propylene	
- 23% propane		- 26,2% propane	
		- 3,3% ethylene	
		- 0,3% ethane	

				INSTRUMENT AND VALVE DATASHEET	
				Pressure Safety Valve	
					
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Rev	By	Date	Description	Based on P&ID Rev.00	

GENERAL	1	Tag Number		PSV-PK6801-03, PSV-PK6801-04	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		23249-03	
	4	Location		Pulsation damper 1st stage outlet	
	5	Nozzle		Full nozzle	
	6	Design type		Safety	
	7	Conv., Bellows, Pilot op.		Conventional type	
	8	Bonnet Type		Closed	
	9	Bonnet connection		Bolted	
PROCESS CONDITIONS	10	Fluid	State	Mixed gas (see notes)	Dry gas
	11	Pressure	Inlet Max.	10,5 bar(g)	
	12	Temperature	Norm. Max.	52 °C	
	13	Design	Press. Temp.	16 bar(g)	75 °C
	14	Ambient Temp.	Min. Max.	1 °C	55 °C
BASIS AND SELECTION	15	Flow		1100-1200 kg/h	
	16	Set Pressure		16 bar(g)	
	17	Molecular Weight	Oper. Sp. Gr.	Case 1: 42,56 kg/kmol Case 2: 42,124 kg/kmol	1
	18	Back Pres. (bar(g))		0 bar(g)	
	19	Allowable Overpressure (%)		10 %	
	20	Compressibility Factor (Z)		1	
	21	Ratio of Specific Heat (Cp/Cv)		1.4	
	22	Operating Viscosity (cP)		-	
	23	Barometric Pressure		1,013	
	24	Max. Allowable Relief Pressure		18,613	
	25	Design Code		API 520, API 521	
	26	Size Basis		Blocked discharge	
	27	Calculated Area (sq.mm)		91,64 mm²	
	28	Selected Area (sq.mm)		153,94 mm²	
	29	Orifice Designation		E	
CONNECTIONS	30				
	31	Inlet Size	Outlet Size	1"	2"
	32	Inlet Connection	Outlet Conn.	RF	RF
	33	Inlet Rating	Outlet Rating	300#	150#
MATERIAL	34				
	35				
	36	Body and Bonnet		Carbon steel	
	37	Seat and Disc		To be advised by supplier	
	38	Guide and Rings		To be advised by supplier	
	39	Spring		To be advised by supplier	
	40	Nozzle		To be advised by supplier	
	41				
OPTIONS	42				
	43	Lever: Plain or Packed		N/A	
	44	Test Gag		N/A	
	45				
CERTIFICATES	46				
	47				
	48	3.1 Material certificate		Yes	
	49	Calibration certificate		No	
CALCULATIONS	50	Leakage test acc to API STD 527		No	
	51	Functional test		No	
	52	Sizing calculation		Yes	
	53				
PURCHASE	54				
	55	Manufacturer		According to approved vendor list	
	56	Model		Supplier to advise	
	57				

Max Back Pressure (barg) 0.6

<b>Note</b>				<b>Case 1:</b>	
				- 77% propylene	
				- 23% propane	
				<b>Case 2:</b>	
				- 70,2% propylene	
				- 26,2% propane	
				- 3,3% ethylene	
				- 0,3% ethane	

				<b>INSTRUMENT AND VALVE DATASHEET</b>	
				<b>Pressure Safety Valve</b>	
					
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This pressure (30barg) is much higher than the maximum required pressure (21barg). The downstream tanks and exchanger are designed for a maximum pressure of 25barg. Is it possible to reduce the set-point without affecting the proper operation of the compressor?

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GENERAL	1	Tag Number		PSV-PK6801-05, PSV-PK6801-06	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		23249-03	
	4	Location		Pulsation damper 2nd stage outlet	
	5	Nozzle		Full nozzle	
	6	Design type		Safety	
	7	Conv., Bellows, Pilot op.		Conventional type	
	8	Bonnet Type		Closed	
	9	Bonnet connection		Bolted	
PROCESS CONDITIONS	10	Fluid	State	Mixed gas (see notes)	Dry gas
	11	Pressure	Inlet Max.	21 bar(g)	
	12	Temperature	Norm. Max.	85 °C	97 °C
	13	Design	Press. Temp.	30 bar(g)	120 °C
	14	Ambient Temp.	Min. Max.	1 °C	55 °C
BASIS AND SELECTION	15	Flow		100-1200 kg/h	
	16	Set Pressure		30 bar(g)	
	17	Molecular Weight	Oper. Sp. Gr.	Case 1: 42,56 kg/kmol Case 2: 42,124 kg/kmol	1
	18	Back Pres. (bar(g))		0 bar(g)	
	19	Allowable Overpressure (%)		10 %	
	20	Compressibility Factor (Z)		1	
	21	Ratio of Specific Heat (Cp/Cv)		1.4	
	22	Operating Viscosity (cP)		-	
	23	Barometric Pressure		1,013	
	24	Max. Allowable Relief Pressure		34,013	
	25	Design Code		API 520, API 521, API 526	
	26	Size Basis		Blocked discharge	
	27	Calculated Area (sq.mm)		93,82 mm²	
	28	Selected Area (sq.mm)		153,94 mm²	
	29	Orifice Designation		D	
CONNECTIONS	30				
	31	Inlet Size	Outlet Size	1"	2"
	32	Inlet Connection	Outlet Conn.	RF	RF
	33	Inlet Rating	Outlet Rating	600#	150#
MATERIAL	34				
	35				
	36	Body and Bonnet		Carbon steel	
	37	Seat and Disc		To be advised by supplier	
	38	Guide and Rings		To be advised by supplier	
	39	Spring		To be advised by supplier	
	40	Nozzle		To be advised by supplier	
OPTIONS	41				
	42				
	43	Lever: Plain or Packed		N/A	
	44	Test Gag		N/A	
CERTIFICATES	45				
	46				
	47				
	48	3.1 Material certificate		Yes	
CALCULATIONS	49	Calibration certificate		No	
	50	Leakage test acc to API STD 527		No	
	51	Functional test		No	
PURCHASE	52	Sizing calculation		Yes	
	53				
	54				
	55	Manufacturer		According to approved vendor list	
	56	Model		Supplier to advise	
	57				

Max Back Pressure (barg) 0.6


**Note**

**Case 1:**

- 77% propylene  
- 23% propane

**Case 2:**

- 70,2% propylene  
- 26,2% propane  
- 3,3% ethylene  
- 0,3% ethane

				INSTRUMENT AND VALVE DATASHEET	
				Pressure Safety Valve	
					
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Rev	By	Date	Description	Based on P&ID Rev.00	