

	<b>LIDCO, Pars SEE Zone, Assaluyeh, Integrated Methanol and Ammonia Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT</b>						
	<b>PSV Data Sheets</b>						
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	Project No.	Vendor Doc.	P.O. No.	Department	Document Type	Serial No	Revision
N278	VD	6019	IN	DS	0039	02	Page 1 of 7

**Airpack B.V. - Air Compressor –  
Integrated Methanol and Ammonia Plant  
17735-COM PSV Data Sheets (K020)**

code-2  
M. Vakili

- This document will be reviewed again after PSV ordering.  
 - All PSV Sizes will be finalized after the approval Instrument calculation sheet document.

02	11-03-2024	Issued for Approval	L.K.	J.J.	S.K.
01	08-11-2023	Issued for Approval	S.K.	J.J.	S.K.
<b>REV.</b>	<b>DATE</b>	<b>DESCRIPTION</b>	<b>DRAWN</b>	<b>CHECKED</b>	<b>APPROVED</b>

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PSV Data Sheets

Document No. 17735-46

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4	X	X				29						54						79					
5	X	X				30						55						80					
6	X	X				31						56						81					
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19						44						69						1					
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**Note**



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01	SK	8-11-2023	Issue for Approval		
Rev	By	Date	Description	Based on P&ID	Rev.06

GENERAL	1	Tag Number		320PSV-8201		
	2	Service		Pressure Safety Valve		
	3	P&ID No.		N278-VD-6019-PR-PID-0002		
	4	Location		Package inlet		
	5	Line number		DAMPENER KV-020-001		
	6	Area classification		Safe area		
	7	Nozzle		Full nozzle		
	8	Design type		Safety		
	9	Conv., Bellows, Pilot op.		Conventional type		
	10	Bonnet Type		Closed		
	11	Bonnet connection		Bolted		
PROCESS CONDITIONS	12	Fluid	State	Air	Vapor	
	13	Pressure	Inlet Max.	9,5 bar(g)	12,5 bar(g)	
	14	Temperature	Norm. Max.	46 °C	-	
	15	Design	Press. Temp.	12,5 bar(g)	75 °C	
	16	Ambient Temp.	Min. Max.	-	-	
	17	Flow		35 Nm <sup>3</sup> /hr		
BASIC AND	18	Set Pressure		12,5 bar(g)		
	19	Molecular Weight	Oper. Sp. Gr.	-	-	
	20	Back Pres. (bar(g))		ATM		
	21	Allowable Overpressure (%)		-		
	22	Compressibility Factor (Z)		1		
	23	Ratio of Specific Heat (Cp/Cv)		-		
	24	Operating Viscosity (cP)		-		
	25	Barometric Pressure		1,013 bar(a)		
	26	Max. Allowable Relief Pressure		14,7 bar(a)		
	27	Design Code		API 520 / 521		
	28	Size Basis		Blocked discharge		
CONNECTIONS	29	Required discharge Area (sq.mm)		VTA		
	30	Selected Area (sq.mm)		VTA		
	31	Orifice Designation		VTA		
	32	Blow-down		5-7%		
	33	Inlet Size	Outlet Size	3/4"	VTA	
	34	Inlet Connection	Outlet Conn.	RF	RF	
	35	Inlet Rating	Outlet Rating	300#	VTA	
	36					
	37					
	MATERIAL	38	Body and Bonnet		SS316	
		39	Seat and Disc		SS316	
40		Guide and Rings		CS		
41		Spring		CS		
OPTIONS	42	Nozzle		SS316		
	43	Tag plate		SS316, Plate with steel wire		
	44					
CERTIFICATES	45					
	46					
	47					
	48	3.1 Material certificate		Yes		
CALCULATIONS	49	Calibration certificate		Yes		
	50	Leakage test acc to API STD 527		Yes		
	51	Functional test		No		
PURCHASE	52	Sizing calculation		No		
	53					
54						
55	Manufacturer		According to approved vendor list			
56	Model		VTA			
57						

All materials should be approved by sub-vendor after as per process fluid conditions. This comment to be consider for all applicable per case



Should be mentioned yes

NOTES :

				INSTRUMENT AND VALVE DATASHEET			
				Pressure Safety Valve			
							
02	LK	11-3-2024	Issue for Approval			Sheet 4 of 7	
01	SK	8-11-2023	Issue for Approval			Based on P&ID Rev.06	
Rev	By	Date	Description				


GENERAL	1	Tag Number		320PSV-8202	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		1st stage discharge	
	5	Line number		DAMPENER KV-020-002	
	6	Area classification		Safe area	
	7	Nozzle		Full nozzle	
	8	Design type		Safety	
	9	Conv., Bellows, Pilot op.		Conventional type	
	10	Bonnet Type		Closed	
	11	Bonnet connection		Bolted	
PROCESS CONDITIONS	12	Fluid	State	Air	Vapor
	13	Pressure	Inlet Max.	23,3 bar(g)	30,5 bar(g)
	14	Temperature	Norm. Max.	157 °C	-
	15	Design	Press. Temp.	30,5 bar(g)	175 °C
	16	Ambient Temp.	Min. Max.	-	-
	17	Flow			
BASIS AND SELECTION	18	Set Pressure		30,5 bar(g)	
	19	Molecular Weight	Oper. Sp. Gr.	-	-
	20	Back Pres. (bar(g))		ATM	
	21	Allowable Overpressure (%)		-	
	22	Compressibility Factor (Z)		1	
	23	Ratio of Specific Heat (Cp/Cv)		-	
	24	Operating Viscosity (cP)		-	
	25	Barometric Pressure		1,013 bar(a)	
	26	Max. Allowable Relief Pressure		34,5 bar(a)	
	27	Design Code		API 520 / 521	
	28	Size Basis		Blocked discharge	
	29	Required discharge Area (sq.mm)		VTA	
	30	Selected Area (sq.mm)		VTA	
	31	Orifice Designation		VTA	
32	Blow-down		5-7%		
CONNECTIONS	33	Inlet Size	Outlet Size	3/4"	VTA
	34	Inlet Connection	Outlet Conn.	RF	RF
	35	Inlet Rating	Outlet Rating	300#	VTA
MATERIAL	36	Body and Bonnet		SS316	
	37	Seat and Disc		SS316	
	38	Guide and Rings		CS	
	39	Spring		CS	
	40	Nozzle		SS316	
	41				
OPTIONS	43	Tag plate		SS316, Plate with steel wire	
	44				
	45				
	46				
	47				
CERTIFICATES	48	3.1 Material certificate		Yes	
	49	Calibration certificate		Yes	
	50	Leakage test acc to API STD 527		Yes	
	51	Functional test		No	
CALCULATIONS	52	Sizing calculation		No	
	53				
	54				
PURCHASE	55	Manufacturer		According to approved vendor list	
	56	Model		VTA	
	57				

**NOTES :**

				INSTRUMENT AND VALVE DATASHEET		 شرکت توسعه صنایع لافات Lavan Industry Development Company
				Pressure Safety Valve		
02	LK	11-3-2024	Issue for Approval	 Airpack Netherlands	Sheet	3 of 7
01	SK	8-11-2023	Issue for Approval		Based on P&ID	Rev.06
Rev	By	Date	Description			

GENERAL	1	Tag Number		320PSV-8203	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		N278-VD-6019-PR-PID-0002	
	4	Location		2nd stage discharge	
	5	Line number		DAMPENER KV-020-004	
	6	Area classification		Safe area	
	7	Nozzle		Full nozzle	
	8	Design type		Safety	
	9	Conv., Bellows, Pilot op.		Conventional type	
	10	Bonnet Type		Closed	
	11	Bonnet connection		Bolted	
PROCESS CONDITIONS	12	Fluid	State	Air	Vapor
	13	Pressure	Inlet Max.	30 bar (g)	39 bar(g)
	14	Temperature	Norm. Max.	116°C	-
	15	Design	Press. Temp.	39 bar (g)	135 °C
	16	Ambient Temp.	Min. Max.	-	-
	17	Flow			
BASIS AND SELECTION	18	Set Pressure		39 bar(g)	
	19	Molecular Weight	Oper. Sp. Gr.	-	-
	20	Back Pres. (bar(g))		ATM	
	21	Allowable Overpressure (%)		-	
	22	Compressibility Factor (Z)		1	
	23	Ratio of Specific Heat (Cp/Cv)		-	
	24	Operating Viscosity (cP)		-	
	25	Barometric Pressure		1,013 bar(a)	
	26	Max. Allowable Relief Pressure		43,9 bar(a)	
	27	Design Code		API 520 / 521	
	28	Size Basis		Blocked discharge	
	29	Required discharge Area (sq.mm)		VTA	
	30	Selected Area (sq.mm)		VTA	
	31	Orifice Designation		VTA	
32	Blow-down		5-7%		
CONNECTIONS	33	Inlet Size	Outlet Size	3/4"	VTA
	34	Inlet Connection	Outlet Conn.	RF	RF
	35	Inlet Rating	Outlet Rating	300#	VTA
MATERIAL	36	Body and Bonnet		SS316	
	37	Seat and Disc		SS316	
	38	Guide and Rings		CS	
	39	Spring		CS	
	40	Nozzle		SS316	
	41				
OPTIONS	43	Tag plate		SS316, Plate with steel wire	
	44				
	45				
	46				
	47				
CERTIFICATES	48	3.1 Material certificate		Yes	
	49	Calibration certificate		Yes	
	50	Leakage test acc to API STD 527		Yes	
	51	Functional test		No	
CALCULATIONS	52	Sizing calculation		No	
	53				
	54				
PURCHASE	55	Manufacturer		According to approved vendor list	
	56	Model		VTA	
	57				

**NOTES :**



				INSTRUMENT AND VALVE DATASHEET		 شركة لوان للصناعة والتطوير لavan Industry Development Company
				Pressure Safety Valve		
02	LK	11-3-2024	Issue for Approval	 Airpack Netherlands	Sheet	6 of 7
01	SK	8-11-2023	Issue for Approval		Based on P&ID	Rev.06
Rev	By	Date	Description			

GENERAL	1	Tag Number		320PSV-8204		
	2	Service		Pressure Safety Valve		
	3	P&ID No.		N278-VD-6019-PR-PID-0002		
	4	Location		Water system		
	5	Line number		3/4"-CWR-320-26-B24C-N		
	6	Area classification		Safe area		
	7	Nozzle		Full nozzle		
	8	Design type		Safety		
	9	Conv., Bellows, Pilot op.		Conventional type		
	10	Bonnet Type		Closed		
	11	Bonnet connection		46 °C	Bolted	
PROCESS CONDITIONS	12	Fluid	State	Water	Liquid	
	13	Pressure	Inlet	Max.	4,4 bar(g)	
	14	Temperature	Norm.	Max.	36 °C	
	15	Design	Press.	Temp.	7 bar(g)	75 °C
	16	Ambient Temp.	Min.	Max.	-	-
	17	Flow	1 Nm <sup>3</sup> /h			
	18	Set Pressure	7 bar(g)			
BASIS AND SELECTION	19	Molecular Weight	Oper. Sp. Gr.	-	-	
	20	Back Pres. (bar(g))		ATM		
	21	Allowable Overpressure (%)		-		
	22	Compressibility Factor (Z)		1		
	23	Ratio of Specific Heat (Cp/Cv)		-		
	24	Operating Viscosity (cP)		-		
	25	Barometric Pressure		1,013 bar(a)		
	26	Max. Allowable Relief Pres.		8,7 bar(a)		
	27	Standard		API 520 / 521		
	28	Discharge		Blocked discharge		
	29	Required discharge Area (sq.mm)		VTA		
	30	Selected Area (sq.mm)		VTA		
31	Orifice Designation		VTA			
32	Blow-down		10-20%			
CONNECTIONS	33	Inlet Size	Outlet Size	3/4"	VTA	
	34	Inlet Connection	Outlet Conn.	RF	RF	
	35	Inlet Rating	Outlet Rating	150#	VTA	
MATERIAL	36	Body and Bonnet		CS		
	37	Seat and Disc		SS316		
	38	Guide and Rings		CS		
	39	Spring		CS		
	40	Nozzle		SS316		
OPTIONS	41					
	42					
	43	Tag plate		SS316, Plate with steel wire		
	44					
	45					
CERTIFICATES	46					
	47					
	48	3.1 Material certificate		Yes		
	49	Calibration certificate		Yes		
CALCULATIONS	50	Leakage test acc to API STD 527		Yes		
	51	Functional test		No		
	52	Sizing calculation		No		
PURCHASE	53					
	54					
	55	Manufacturer		According to approved vendor list		
	56	Model		VTA		
	57					

According to meeting tube rupture scenario shall be considered for this PSV

clarify why CS is considered for PSV-8204

**NOTES :**

				INSTRUMENT AND VALVE DATASHEET		
				Pressure Safety Valve		
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Rev	By	Date	Description	Based on P&ID Rev.06		