

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

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

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
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.

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PSV Data Sheets

Document No. 17735-46

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**INSTRUMENT AND VALVE  
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شرکت  
توسعه  
صنعت  
لوان  
Lavan  
Industry  
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Company



02	LK	11-3-2024	Issue for Approval
01	SK	8-11-2023	Issue for Approval
Rev	By	Date	Description



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	
BASIS AND SELECTION	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	
	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
	36				
	37				
MATERIAL	38	Body and Bonnet		SS316	
	39	Seat and Disc		SS316	
	40	Guide and Rings		CS	
	41	Spring		CS	
	42	Nozzle		SS316	
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 :**

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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		 شركة توسعه صنایع لافات Lavan Industry Development Company
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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 :**

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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		Bolted	
PROCESS CONDITIONS	12	Fluid	State	Water	Liquid
	13	Pressure	Inlet Max.	4,4 bar(g)	
	14	Temperature	Norm. Max.	36 °C	46 °C
	15	Design	Press. Temp.	7 bar(g)	75 °C
	16	Ambient Temp.	Min. Max.	-	-
	17	Flow		1 Nm <sup>3</sup> /h	
BASIS AND SELECTION	18	Set Pressure		7 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		8,7 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		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				

**NOTES :**

				INSTRUMENT AND VALVE DATASHEET		 شرکت توسعه صنایع لافات Lavan Industry Development Company
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