

	LIDCO, Pars SEE Zone, Assaluyeh, Integrated Methanol and Ammonia Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT																				
	PSV Data Sheets																				
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Serial No	0039																				
Revision	04																				

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

**please note noise requirement shall be reported completely in Noise data sheet which has been included in VPIS.
also on PSV data sheet, SPL at 1 m distance for each valve shall be reported.**

code-2
M.V

04	17-04-2024	Issued for Approval	L.K.	J.J.	S.K.
03	26-03-2024	Issued for Approval	L.K.	J.J.	S.K.
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.
REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

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PSV Data Sheets

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02	LK	11-3-2024	Issue for Approval			
01	SK	8-11-2023	Issue for Approval			


شرکت توسعه صنایع لوان
Lavan Industry Development Company



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 ³ /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 (%)		10%	
	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				
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		Yes	
	53				
	54				
PURCHASE	55	Manufacturer		According to approved vendor list	
	56	Model		VTA	
	57				

NOTES :


- Vendor to confirm chosen materials are suitable for process conditions.

				INSTRUMENT AND VALVE DATASHEET		 <p>شرکت توسعه صنایع لاهات Lavan Industry Development Company</p>
				Pressure Safety Valve		
						
04	LK	17-4-2024	Issue for Approval			
03	LK	26-3-2024	Issue for Approval			
02	LK	11-3-2024	Issue for Approval			
01	SK	8-11-2023	Issue for Approval			
Rev	By	Date	Description			
				Sheet 4 of 7 Based on P&ID Rev.07		

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		35 Nm ³ /hr	
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 (%)		10%	
	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	
OPTIONS	41				
	42				
	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		Yes	
	53				
	54				
PURCHASE	55	Manufacturer		According to approved vendor list	
	56	Model		VTA	
	57				

NOTES :



- Vendor to confirm chosen materials are suitable for process conditions.

				INSTRUMENT AND VALVE DATASHEET		 <p>شرکت توسعه صنایع لوان Lavan Industry Development Company</p>
				Pressure Safety Valve		
04	LK	17-4-2024	Issue for Approval			
03	LK	26-3-2024	Issue for Approval			
02	LK	11-3-2024	Issue for Approval			
01	SK	8-11-2023	Issue for Approval			
Rev	By	Date	Description	Sheet 3 of 7		
				Based on P&ID Rev.07		

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		35 Nm ³ /hr	
BASIS AND SELECTION	18	Set Pressure		39 bar(g)	
	19	Molecular Weight	Oper. Sp. Gr.	-	-
	20	Back Pres. (bar(g))		ATM	
	21	Allowable Overpressure (%)		10%	
	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		Yes	
	53				
	54				
PURCHASE	55	Manufacturer		According to approved vendor list	
	56	Model		VTA	
	57				

NOTES :


- Vendor to confirm chosen materials are suitable for process conditions.

				INSTRUMENT AND VALVE DATASHEET		 شركة توسعه صنایع لوان Lavan Industry Development Company
				Pressure Safety Valve		
04	LK	17-4-2024	Issue for Approval	 Sheet 6 of 7 Based on P&ID Rev.07		
03	LK	26-3-2024	Issue for Approval			
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-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.		46 °C
	15	Design	Press. Temp.	7 bar(g)	75 °C
	16	Ambient Temp.	Min. Max.	-	-
TUBE RUPTURE CASE	17	Flow		1 Nm ³ /h	
	18	Fluid	State	Water/Air	Liquid/Gas
	19	Pressure	Temperature	max. 39 bar(g)	135 °C
	20	Flow on air side		35 Nm ³ /h	
BASIS AND SELECTION	21	Set Pressure		7 bar(g)	
	22	Molecular Weight	Oper. Sp. Gr.	-	-
	23	Back Pres. (bar(g))		ATM	
	24	Allowable Overpressure (%)		10%	
	25	Compressibility Factor (Z)		1	
	26	Ratio of Specific Heat (Cp/Cv)		-	
	27	Operating Viscosity (cP)		-	
	28	Barometric Pressure		1,013 bar(a)	
	29	Max. Allowable Relief Pressure		8,7 bar(a)	
	30	Design Code		API 520 / 521	
	31	Size Basis		Tube rupture & thermal expansion	
	32	Required discharge Area (sq.mm)		VTA	
	33	Selected Area (sq.mm)		VTA	
	34	Orifice Designation		VTA	
CONNECTIONS	35	Blow-down		10-20%	
	36	Inlet Size	Outlet Size	3/4"	VTA
	37	Inlet Connection	Outlet Conn.	RF	RF
MATERIAL	38	Inlet Rating	Outlet Rating	150#	VTA
	39	Body and Bonnet		CS	
	40	Seat and Disc		SS316	
	41	Guide and Rings		CS	
	42	Spring		CS	
	43	Nozzle		SS316	
OPTIONS	44				
	45	Tag plate		SS316, Plate with steel wire	
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		Yes	
PURCHASE	53				
	54				
	55	Manufacturer		According to approved vendor list	
	56	Model		VTA	
	57				

NOTES :

- Vendor to confirm chosen materials are suitable for process conditions.

				INSTRUMENT AND VALVE DATASHEET		 شرکت توسعه صنایع لایان Lavan Industry Development Company
				Pressure Safety Valve		
04	LK	17-4-2024	Issue for Approval	 Sheet 7 of 7 Based on P&ID Rev.07		
03	LK	26-3-2024	Issue for Approval			
02	LK	11-3-2024	Issue for Approval			
01	SK	8-11-2023	Issue for Approval			
Rev	By	Date	Description			