



ASPC Project



END CUSTOMER	: Arya Sasol Polymer Company
CONTRACTOR	: DYPNF Co., Ltd.
VENDOR NAME	: Airpack Netherlands BV
EQUIPMENT DESCRIPTION	: Screw Compressor & Roots Blower
PURCHASE ORDER NUMBER	: PO-PC2312-08

Customer Document : 3944-VD-0171-DYP-RE-400-DSH-0006
Number

Airpack Document Number : 23383-12B


Document Title : PSV data sheet

Review Code and Status		Contractor Initials/Signature	Date signed
<input type="checkbox"/>	Code 1 REJECTED - Vendor to revise and Resubmit. Work cannot proceed		
<input type="checkbox"/>	Code 2 Comments As Noted - Work May proceed, subject to compliance with and incorporation of comments		
<input type="checkbox"/>	Code 3 No Comments - Work may proceed.		
<input type="checkbox"/>	Code 4 Information only - Review not required.		

01	Issued for Information	13-04-2026	LK	SC	JJ
Rev. No.	Description	Date	Prepared by	Checked by	Approved by


INDEX			
No.	Device	Tag Number	Page
1	Pressure Safety Valve	44SV4001001V, 44SV4002001V	3
2	Pressure Safety Valve	44SV8004001V, 44SV8004003V, 44SV8005001V, 44SV8005003V, 44SV8005004V	4
3	Pressure Safety Valve	44SV8004005V, 44SV8004007V	5
4	Pressure Safety Valve	44SV8004009V, 44SV8004011V	6
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
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24			
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26			
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54			
55			

Notes:

				PSV DATASHEET Index	
					
00	LK	13/04/2026	For Approval	Sheet	2 of 6
Rev	By	Date	Description	Based on P&ID	Rev.03


GENERAL	1	Tag Number		44SV4001001V, 44SV4002001V	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		23383-03	
	4	Location		1st stage	
	5	Nozzle		Full nozzle	
	6	Design type		Safety	
	7	Conv., Bellows, Pilot op.		Conventional type	
	8	Bonnet Type		Closed	
	9	Bonnet connection		Screwed	
PROCESS CONDITIONS	10	Fluid	State	Nitrogen	Dry gas
	11	Pressure	Inlet Max.	1.903 bar(g)	
	12	Temperature	Norm. Max.	189 °C	
	13	Design	Press. Temp.	4.2 bar(g)	215 °C
BASIS AND SELECTION	14	Ambient Temp.	Min. Max.	5 °C	48 °C
	15	Flow (Nm³/hr)		6416 Nm3/h	
	16	Set Pressure		4.2 bar(g)	
	17	Molecular Weight	Oper. Sp. Gr.	28 g/mol	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		6.513	
	25	Design Code		API 520, API 521, API 526	
	26	Size Basis		Blocked discharge	
	27	Calculated Area (sq.mm)		tbd	
	28	Selected Area (sq.mm)		2248 mm²	
29	Orifice Designation		L		
CONNECTIONS	30				
	31	Inlet Size	Outlet Size	DN100	DN150
	32	Inlet Connection	Outlet Conn.	RF	RF
	33	Inlet Rating	Outlet Rating	PN16	PN16
MATERIAL	34				
	35				
	36	Body and Bonnet		Carbon steel (SA-216 Gr. WCB)	
	37	Seat and Disc		SS	
	38	Guide and Rings		Carbon steel (SA-216 Gr. WCB)	
	39	Spring		Chrome alloy	
OPTIONS	40	Nozzle		SS	
	41				
	42				
	43	Lever: Plain or Packed		Packed	
CALCULATIONS	44	Test Gag		N/A	
	45				
	46				
	47				
PURCHASE	##	Sizing calculation		Yes / No	
	##				
	##				
PURCHASE	##	Manufacturer		Leser	
	##	Model		5262	
	##				

NOTES :

				PSV DATASHEET	
				Pressure Safety Valve	
					
00	LK	13/04/2026	For Approval	Sheet	3 of 6
Rev	By	Date	Description	Based on P&ID	Rev.03


GENERAL	1	Tag Number		44SV8004001V, 44SV8004003V, 44SV8005001V, 44SV8005003V, 44SV8005004V	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		23383-03	
	4	Location		1st stage	
	5	Nozzle		Full nozzle	
	6	Design type		Safety	
	7	Conv., Bellows, Pilot op.		Conventional type	
	8	Bonnet Type		Closed	
	9	Bonnet connection		Screwed	
PROCESS CONDITIONS	10	Fluid	State	Air	Wet gas
	11	Pressure	Inlet Max.	1.473 bar(g)	
	12	Temperature	Norm. Max.	167 °C	
	13	Design	Press. Temp.	TBA	TBA
	14	Ambient Temp.	Min. Max.	2 °C	48 °C
BASIS AND SELECTION	15	Flow (Nm³/hr)		4247 Nm³/hr	
	16	Set Pressure		2.8 bar(g)	
	17	Molecular Weight	Oper. Sp. Gr.	28,97 kg/mol	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		6.513	
	25	Design Code		API 520, API 521, API 526	
	26	Size Basis		Blocked discharge	
	27	Calculated Area (sq.mm)		tbd	
	28	Selected Area (sq.mm)		2248 mm²	
29	Orifice Designation		L		
CONNECTIONS	30				
	31	Inlet Size	Outlet Size	DN100	DN150
	32	Inlet Connection	Outlet Conn.	RF	RF
	33	Inlet Rating	Outlet Rating	PN16	PN16
	34				
MATERIAL	35				
	36	Body and Bonnet		Carbon steel (SA-216 Gr. WCB)	
	37	Seat and Disc		SS	
	38	Guide and Rings		Carbon steel (SA-216 Gr. WCB)	
	39	Spring		Chrome alloy	
	40	Nozzle		SS	
OPTIONS	41				
	42				
	43	Lever: Plain or Packed		Packed	
	44	Test Gag		N/A	
	45				
CALCULATIONS	46				
	47				
	##	Sizing calculation		Yes / No	
PURCHASE	##	Manufacturer		Leser	
	##	Model		5262	
	##				

NOTES :

				PSV DATASHEET	
				Pressure Safety Valve	
					
00	LK	13/04/2026	For Approval	Sheet 4 of 6	
Rev	By	Date	Description	Based on P&ID Rev.03	


GENERAL	1	Tag Number		44SV8004005V, 44SV8004007V	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		23383-03	
	4	Location		1st stage	
	5	Nozzle		Full nozzle	
	6	Design type		Safety	
	7	Conv., Bellows, Pilot op.		Conventional type	
	8	Bonnet Type		Closed	
	9	Bonnet connection		Screwed	
PROCESS CONDITIONS	10	Fluid	State	Air	Wet gas
	11	Pressure	Inlet Max.	0.983 bar(g)	
	12	Temperature	Norm. Max.	154 °C	
	13	Design	Press. Temp.	TBA	TBA
	14	Ambient Temp.	Min. Max.	2 °C	48 °C
BASIS AND SELECTION	15	Flow (Nm³/hr)		4266 Nm³/hr	
	16	Set Pressure		1.067 bar(g)	
	17	Molecular Weight	Oper. Sp. Gr.	28,97 kg/mol	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		6.513	
	25	Design Code		API 520, API 521, API 526	
	26	Size Basis		Blocked discharge	
	27	Calculated Area (sq.mm)		tbd	
	28	Selected Area (sq.mm)		To be advised by supplier	
	29	Orifice Designation		Q	
CONNECTIONS	30				
	31	Inlet Size	Outlet Size	DN150	DN200
	32	Inlet Connection	Outlet Conn.	RF	RF
	33	Inlet Rating	Outlet Rating	PN16	PN16
	34				
MATERIAL	35				
	36	Body and Bonnet		Carbon steel (SA-216 Gr. WCB)	
	37	Seat and Disc		SS	
	38	Guide and Rings		Carbon steel (SA-216 Gr. WCB)	
	39	Spring		Chrome alloy	
	40	Nozzle		SS	
	41				
OPTIONS	42				
	43	Lever: Plain or Packed		Packed	
	44	Test Gag		N/A	
	45				
	46				
CALCULATIONS	47				
	##	Sizing calculation		Yes / No	
	##				
PURCHASE	##	Manufacturer		Leser	
	##	Model		5262	
	##				

NOTES :

				PSV DATASHEET	
				Pressure Safety Valve	
					
00	LK	13/04/2026	For Approval	Sheet	5 of 6
Rev	By	Date	Description	Based on P&ID	Rev.03

GENERAL	1	Tag Number		44SV8004009V, 44SV8004011V	
	2	Service		Pressure Safety Valve	
	3	P&ID No.		23383-03	
	4	Location		1st stage	
	5	Nozzle		Full nozzle	
	6	Design type		Safety	
	7	Conv., Bellows, Pilot op.		Conventional type	
	8	Bonnet Type		Closed	
	9	Bonnet connection		Screwed	
PROCESS CONDITIONS	10	Fluid	State	Air	Wet gas
	11	Pressure	Inlet Max.	2.213 bar(g)	
	12	Temperature	Norm. Max.	205 °C	
	13	Design	Press. Temp.	TBA	TBA
	14	Ambient Temp.	Min. Max.	2 °C	48 °C
BASIS AND SELECTION	15	Flow (Nm³/hr)		7339 Nm³/hr	
	16	Set Pressure		3.5 bar(g)	
	17	Molecular Weight	Oper. Sp. Gr.	28,97 kg/mol	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		6.513	
	25	Design Code		API 520, API 521, API 526	
	26	Size Basis		Blocked discharge	
	27	Calculated Area (sq.mm)		4174 mm²	
	28	Selected Area (sq.mm)		5026 mm²	
	29	Orifice Designation		P	
CONNECTIONS	30				
	31	Inlet Size	Outlet Size	DN100	DN150
	32	Inlet Connection	Outlet Conn.	RF	RF
	33	Inlet Rating	Outlet Rating	PN16	PN16
	34				
MATERIAL	35				
	36	Body and Bonnet		Carbon steel (SA-216 Gr. WCB)	
	37	Seat and Disc		SS	
	38	Guide and Rings		Carbon steel (SA-216 Gr. WCB)	
	39	Spring		Chrome alloy	
	40	Nozzle		SS	
	41				
OPTIONS	42				
	43	Lever: Plain or Packed		Packed	
	44	Test Gag		N/A	
	45				
	46				
CALCULATIONS	47				
	##	Sizing calculation		Yes / No	
	##				
PURCHASE	##	Manufacturer		Leser	
	##	Model		5262	
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				PSV DATASHEET	
				Pressure Safety Valve	
					
00	LK	13/04/2026	For Approval	Sheet	6 of 6
Rev	By	Date	Description	Based on P&ID	Rev.03