

 <div>Emerson Leicester  United Kingdom</div>		Pressure Relief Valve Sizing & Selection Report					
		1/06/2021					
Quote Number:		No	Prpd.	Chk.	Appr.	Date	Revision
Client: Total Olefins Antwerp Location: Project: 21220							
End-User Ref. No.: Project Ref. No.:							
1	Valve ID				41	SIZING DATA	
2	Tag No.	RV296A/B			42	Design Code	Non-Code
3	Service				43	Sizing Basis	Thermal Relief
4	PID No.				44	Fluid State at Inlet	Gas / Vapor
5	Line No.				45	Relieving Case	Pressure Relief
6		Quantity	2		46	Fluid Properties	
7	GENERAL				47	Fluid Name	Ethylene
8	Valve Type	Conventional, DSO, Plastic Seat			48	Molecular Weight, M	28.050
9	Safety / Relief	Safety	Balanced	No	49	Compressibility, Z	1.000
10	Nozzle	Semi	Bonnet	Closed	50	Ratio of Sp. Heats, k (Cp / Cv)	1.240
11	CONNECTIONS				51	Gas Constant, C	341.2
12	Inlet	1"	Fingd.	300# RF	52		
13	Outlet	1"	Fingd.	300# RF	53		
14	MATERIALS OF CONSTRUCTION				54		
15	Body	SS SA351-CF8M			55		
16	Inlet Bushing	SS A479-316			56		
17	Bonnet	N/A			57		
18	Cap	SS A479-316			58		
19	Nozzle	SS A479-316			59	Sizing Coefficients	Unit -
20	Seat	Teflon®			60	Effective K, Gas	0.816
21	Seals	Teflon®			61	Kb	Kc
22	Spindle	SS A479-316			62		
23	Guide	SS A479-316			63		
24	Spring	SS A313-316			64	Required Capacity	Unit
25	Cap Type	Screwed			65	Total	
26	NACE MR0175/ISO 15156:2015	No			66		
27	Accessories				67	Pressures	Unit barg
28					68	MAWP	Operating
29					69	Set	CDTP
30					70	Over Pressure	
31	SIZING / SELECTION SUMMARY				71	Back Pressure	Built-Up
32	Valve Model No.	81SW8B8B-6-SPL			72		Constant Superimposed
33	Brand	Anderson Greenwood			73		Variable Superimposed
34	Area	Calculated	Selected	70.968	74		Total
35	(mm²)	Data Set	Orifice	API	75	Inlet Loss	0
36		Unit	Required	kg/hr	76	Atmospheric (Barometric)	1.013 bara
37	Flow		Maximum	734.605	77	Temperatures	Unit °C
38					78	Operating	Normal System
39	Reaction Force, Open Discharge	58.4 N			79	Design Min	Relieving
40	Noise Level (db), Open Discharge	98.5 at 100-ft			80		Design Max
Tag Notes	PRV_CERT_PED / PRV_DOC_DRAWCUST2 Valve is liquid cryogenic thermal relief application, 81S is suitable for TRV liquid applications SPL = Cryogenic TRV Inlet and outlet connections are welded Materials are offered as free origin, commercial grade No special requirements are offered				Valve Dimensions	mm	A
							119.89
							B
							120.65
							C
	kg	Weight	305.31				
			6.80				

