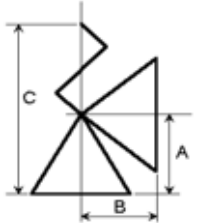
 <p>EMERSON edgardovicente.chiari@emerson.com</p> <p>Madrid, Spain +34 911 111 320 edgardovicente.chiari@emerson.com</p>				Pressure Relief Valve Sizing & Selection Report						
				1	EVC			7-abr.-2022	New temperatures	
				0	EVC			7-mar.-2022	New valve on scope.	
Quote Number: 093-093				No	Prpd.	Chk.	Appr.	Date	Revision	
Client: TECHNIP ENERGIES Location: CARTAGENA, SPAIN Project: C43 "New Bios 2G Hydrotreatment Unit"										
End-User Ref. No.: 201754C001 Project Ref. No.: U-608 Hydrogen Unit										
1	Valve ID				41	SIZING DATA				
2	Tag No.	608-PSV-1140			42	Design Code	ASME VIII/XIII - UV		Sizing Std.	API 520
3	Service	Nitrogen Compressor Suction			43	Sizing Basis	Valve Open			
4	PID No.	P-C43-A-110990 H56			44	Fluid State at Inlet	Gas / Vapor			
5	Line No.	4"SH-5707-D3-H	Quantity		45	Relieving Case	Pressure Relief			
6			1		46	Fluid Properties				
7	GENERAL				47	Fluid Name		Nitrogen		
8	Valve Type	Balanced Bellows, Direct Spring-Op			48	Molecular Weight, M		28.0		
9	Safety / Relief	Safety	Balanced	Yes	49	Compressibility, Z		1.000		
10	Nozzle	Full	Bonnet	Vented	50	Ratio of Sp. Heats, k (Cp / Cv)		1.400		
11	CONNECTIONS				51	Gas Constant, C		270.3		
12	Inlet	1"	Flngd.	300# RF	52					
13	Outlet	2"	Flngd.	150# RF	53					
14	MATERIALS OF CONSTRUCTION				54					
15	Body / Base	CS SA216-WCB/WCC			55					
16	Bonnet / Cylinder	CS SA216-WCB/WCC			56					
17	Nozzle	316 SST			57					
18	Disc	316 SST			58					
19	Seat	Metal			59	Sizing Coefficients		Unit	-	
20	Spindle	416 SST			60	Effective K, Gas		0.975		
21	Guide	SS A297 Gr. HE			61	Kb	Kc	1	1	
22	Spring	Ctd. Alloy Steel			62					
23	Gaskets	316 SST			63					
24	Bellows	Inconel® 625			64	Required Capacity		Unit		
25	Cap Type	Bolted w/ Test Rod			65	Total				
26	NACE MR0175/ISO 15156:2015	No			66					
27	Accessories	Bug Screen			67	Pressures		Unit	kg/cm² g	
28					68	MAWP	Operating	15	6	
29					69	Set	CDTP	13.6	13.600	
30					70	Over Pressure		1.36	10%	
31	SIZING / SELECTION SUMMARY				71	Built-Up		1.6		
32	Valve Model No.	1D2JBS-E36M-P			72	Back Pressure	Constant Superimposed		0.3	
33	Brand	Crosby®			73		Variable Superimposed		1.5	
34	Area	Calculated	Selected	0.710	74		Total		3.4	
35	(cm²)	Data Set	Orifice	API	75	Inlet Loss		0	0%	
36	Flow	Unit	Required	kg/hr	76	Atmospheric (Barometric)		1.033	kg/cm² a	
37			Maximum	884.335	77	Temperatures		Unit	°C	
38					78	Normal System				
39	Reaction Force, Open Discharge		80.3 N		79	Operating	Relieving	35	35	
40	Noise Level (db), Open Discharge		126.4 at 1.0000-m		80	Design Min	Design Max		80	
Tag Notes	1. Maximum Content P(%) 0.020 - S(%) 0.015. (body and bonnet) 2. Standard C4M acc. ISO 12944 3. Opening Adjustment 5% 4. Blow down: 11.8% 5. ASME "UV" Stamp required.				Valve Dimensions	mm	A			
							104.90			
							B			
							114.30			
							C			
						kg	Weight			
		16.33								