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Pressure Relief Valve Sizing & Selection Report

No	Prpd.	Chk.	Appr.	Date	Revision
0	NF			14-Feb-2020	First Issue

Quote Number: QUO-1314410-V9X5.0

Client: Impexron GmbH
Location:
Project: 427286
End-User Ref. No.:
Project Ref. No.:

Valve ID

Tag No.	PRV0001
Service	
PID No.	
Line No.	101
Quantity	3

GENERAL

Valve Type	Balanced Bellows, Direct Spring-Op		
Safety / Relief	Safety Relief	Balanced	Yes
Nozzle	Full	Bonnet	Vented

CONNECTIONS

Inlet	1 1/2"	Flngd.	600#	RF	Standard
Outlet	3"	Flngd.	150#	RF	ASME B16.5

MATERIALS OF CONSTRUCTION

Body / Base	CS SA216-WCB/WCC
Bonnet / Cylinder	CS SA216-WCB/WCC
Nozzle	316 SST
Disc	316 SST
Seat	Metal
Spindle	416 SST
Guide	SS A297 Gr. HE
Spring	Chrome Steel - Corr. Rest.
Gaskets	316 SST
Bellows	Inconel® 625
Cap Type	Screwed
NACE MR0175 / ISO 15156:2015	No

Accessories

SIZING / SELECTION SUMMARY

Valve Model No.		1.5G3JLTJBS-E45J		
Brand		Crosby®		
Area (in²)	Calculated	Selected	0,535	0,567
	Data Set	Orifice	ASME	G
Flow	Unit	Required	GPM (US)	503
	Rated	Actual	533,911	593,234
Reaction Force, Open Discharge			25,31 daN	
Noise Level (db), Open Discharge			N/A	

SIZING DATA

Design Code	ASME Section VIII	Sizing Std.	API 520
Sizing Basis	Blocked Discharge		
Fluid State at Inlet	Liquid		
Relieving Case	Pressure Relief		

Fluid Properties

Fluid Name	Crude Oil, Heavy
Sp. Gravity, G	0,862
Viscosity	136,00000 cP
Reynolds No.	11850,86
Reynolds No. (max)	12579,12

Sizing Coefficients

Unit: -

K, Liquid	Kd, Liquid	0,656	0,729
Kw	Kc	1,0	1,0
Kv	Kv (max)	0,980	0,981

Required Capacity

Unit: GPM (US)

Total	503

Pressures

Unit: psig

MAWP	Operating		
Set	CDTP	1160	1160,00
Over Pressure		116,0	10%
Back Pressure	Built-Up		0
	Constant Superimposed		0
	Variable Superimposed		0
	Total		0
Inlet Loss		0	0%
Atmospheric (Barometric)		14,696	psia

Temperatures

Unit: °C

	Normal System		
Operating	Relieving		250
Design Min	Design Max		

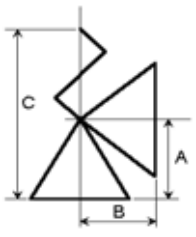
Tag Notes

Please review the data sheet and confirm acceptance.
Presumption: Back Pressure = Atmosphere.
Presumption: Media = Crude Oil
Presumption: Temperature = 40°C
Painting manufacturer standard.
All parts are free sourced.
UV – Stamp

In case of order please provide temperature.
acc. Serial 06-45157

Valve Dimensions

in A	4,88
in B	6,00
in C	23,25
lb Weight	50



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Pressure Relief Valve Dimensional Drawing

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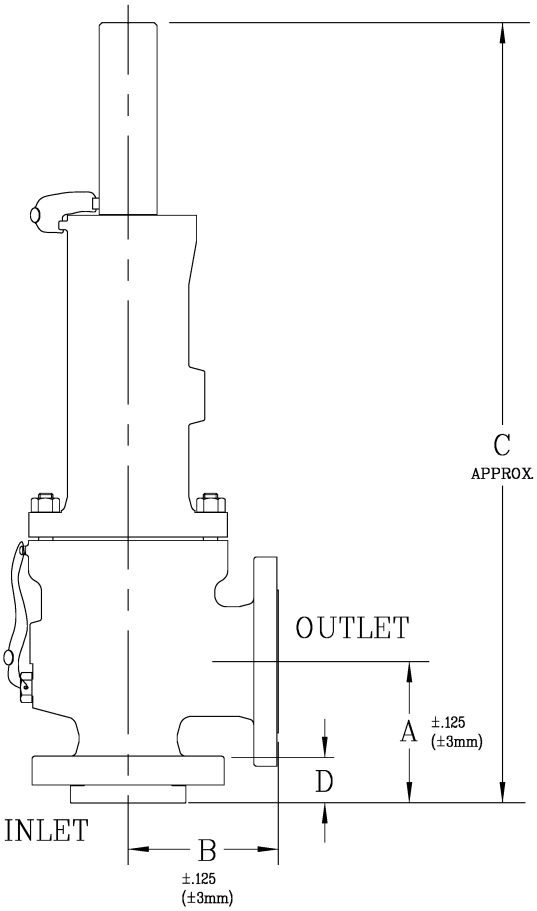
	Valve ID		
1			
2	Tag No.	PRV0001	
3	Service		
4	PID No.		
5	Line No.	101	Quantity
6			3

	SELECTION SUMMARY					
7						
8	Valve Model No.	1.5G3JLTJBS-E45J				
9	Brand	Crosby®				
10	CONNECTIONS					
11	Inlet	1 1/2"	Flngd.	600#	RF	Standard
12	Outlet	3"	Flngd.	150#	RF	ASME B16.5



Wt.=	*50 lb*	=	*22,68 kg*
A=	*4,88 in*	=	*123,95 mm*
B=	*6,00 in*	=	*152,40 mm*
C=	*23,25 in*	=	*590,55 mm*
D=	*1,75 in*	=	*44,45 mm*
E=		=	
F=		=	
G=		=	
H=		=	

Tag Notes

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In case of order please provide temperature.
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Dimension Notes

- Accessories not shown.
- Actual valve may vary from. image.