

Pressure Relief Valve Specification Sheet

Date Prepared: 1/18/2006 1:41:41 PM

General Job Data

Customer	Requisition #	Job #	Job Description	
Enerflex Systems Ltd.		051009		
Prepared By	Checked By	Approved By	Job Status	Revision #
GKS			Sizing/Selecting	0

PSV Identification

Tag #	Tag Description	Tag Status	P / ID	Discharge To	Revision #	
Stage 1		Valve Selected			0	
Plant #	Drawing #	Index #	Issue For	Service	Inlet Line #	Outlet Line #

Sizing Basis

ASME Code	Cause of Over Pressure	Fluid State	Rupture Disk Coeff.	NACE
ASME Sec. VIII	-	Gas (Volume)	No Rupture Disk, 1	No

Process Parameters

MAWP	- PSIG	Design Temp.	- °F	Constant Back P.	0 PSIG
Operating Pressure	633 PSIG	Operating Temp.	350 °F	Variable Back P.	0 PSIG
Set Pressure	707 PSIG	Relief Temp.	350 °F	Over Pressure	70.7 PSIG
Atm Pressure	14.697 PSIA	Relief Pressure	792.4 PSIA		

Compressible State

Fluid Type	User Defined	Molecular Weight	18.851 Mol Wt	Gas Flow Const.	344.86
Req. Flow Cap.	2.125 M ft ³ /day	Specific Gravity	0.6507 sp gr	Compressibility	0.9421
Calculated Area	0.11938 in ²	Specific Heat Ratio	1.2786	Fluid Name	Sweet Gas

Resolved Area: 0.11938 in² (Resolved by Maximum)

Model Selection

Selection Warning: selected valve not valid for Kd parameter.

Manufacturer	Farris	API Letter		Inlet Size	1.00 in	Outlet Size	1.00 in
Model Number	27DA33-M20	API Area		In. Rating		Out. Rating	
Valve Design	Conventional	ASME Area	0.125 in ²	In. Facing	MNPT	Out. Facing	FNPT
Cap Constrn	Plain	Max. Cap.	2.225 M ft ³ /day	Test Gag	No	Quantity	1
React. Force	118.22 lbs	Noise	105.71 dBa				

Model Materials

Body	316 ss	Bonnet	Carbon Steel	Nozzle	316 ss
Disc	316 ss	Guide	316 ss	Spring	316 ss

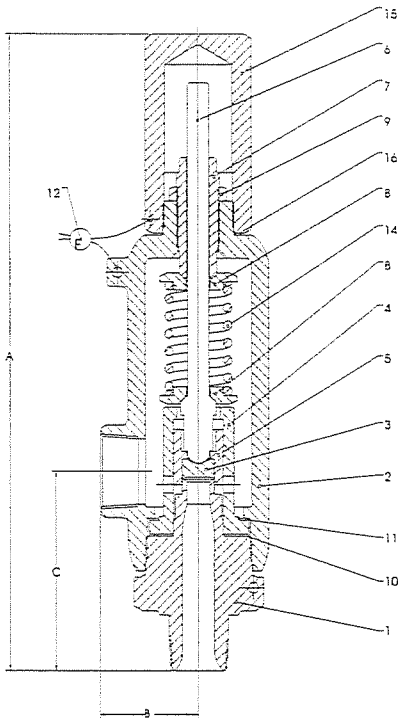
Pressure Relief Valve Reference Drawing

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Enerflex Systems Ltd.		051009		
Tag #	Tag Description	Tag Status	P / ID	
Stage 1		Valve Selected		
ASME Code	Fluid State	Resolved Area	Rupture Disk Coeff.	NACE
ASME Sec. VIII	Gas (Volume)	0.11938 in ²	No Rupture Disk, 1	No
Operating Pressure	Set Pressure	Constant Back P.	Variable Back P.	Cold Diff. Test P.
633 PSIG	707 PSIG	0 PSIG	0 PSIG	714.07 PSIG
Operating Temp.	Relief Temp.	Operating to Set %	Over Pressure	Percent Over P.
350 °F	350 °F	89.533 %	70.7 PSIG	10 %

Selection Warning: selected valve not valid for Kd parameter.



Dimensions

Weight	Dimension A	Dimension B
8 lb	11 1/2 in	1 3/4 in
Dimension C		
3 3/4 in		

Farris 27DA33-M20

API Letter	API Area	ASME Area
		0.125 in ²

	Size	Rating	Facing
Inlet:	1.00 in		MNPT
Outlet:	1.00 in		FNPT

Valve Design	Cap Constrn	Test Gag
Conventional	Plain	No
Max. Rel. Cap.	React. Force	Noise
2.225 M ft ³ /day	118.22 lbs	105.71 dBa

Materials

Body (1)	Bonnet (2)
316 ss	Carbon Steel
Nozzle (1)	Disc (3)
316 ss	316 ss
Guide (4)	Spring (13)
316 ss	316 ss

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Prepared By	Checked By	Approved By	Job Status	Revision #
GKS			Sizing/Selecting	0

PSV Identification

Tag #	Tag Description	Tag Status	P / ID	Discharge To	Revision #	
Stage 2		Valve Selected			0	
Plant #	Drawing #	Index #	Issue For	Service	Inlet Line #	Outlet Line #

Sizing Basis

ASME Code	Cause of Over Pressure	Fluid State	Rupture Disk Coeff.	NACE
ASME Sec. VIII	-	Gas (Volume)	No Rupture Disk, 1	No

Process Parameters

MAWP	- PSIG	Design Temp.	- °F	Constant Back P.	0 PSIG
Operating Pressure	1000 PSIG	Operating Temp.	350 °F	Variable Back P.	0 PSIG
Set Pressure	1292 PSIG	Relief Temp.	350 °F	Over Pressure	129.2 PSIG
Atm Pressure	14.697 PSIA	Relief Pressure	1435.9 PSIA		

Compressible State

Fluid Type	User Defined	Molecular Weight	18.851 Mol Wt	Gas Flow Const.	345.38
Req. Flow Cap.	2.125 M ft ³ /day	Specific Gravity	0.6507 sp gr	Compressibility	0.9202
Calculated Area	0.065011 in ²	Specific Heat Ratio	1.2838	Fluid Name	Sweet Gas

Resolved Area: 0.065011 in² (Resolved by Maximum)

Model Selection

Selection Warning: selected valve not valid for Kd parameter.

Manufacturer	Farris	API Letter		Inlet Size	1.00 in	Outlet Size	1.00 in
Model Number	27CA33-M20	API Area		In. Rating		Out. Rating	
Valve Design	Conventional	ASME Area	0.068 in ²	In. Facing	MNPT	Out. Facing	FNPT
Cap Constrn	Plain	Max. Cap.	2.2227 M ft ³ /day	Test Gag	No	Quantity	1
React. Force	116.4 lbs	Noise	105.72 dBa				

Model Materials

Body	316 ss	Bonnet	Carbon Steel	Nozzle	316 ss
Disc	316 ss	Guide	316 ss	Spring	316 ss

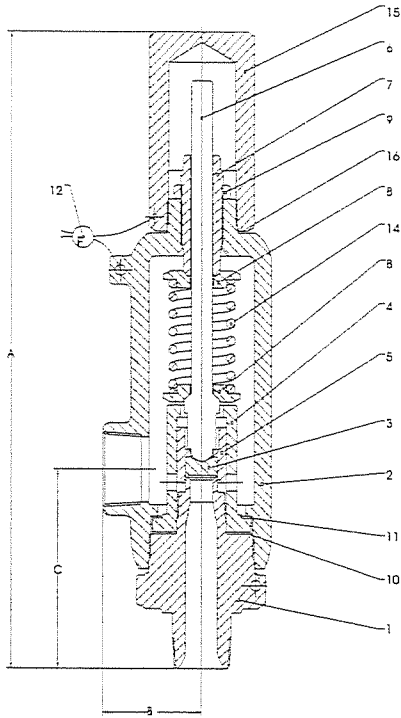
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Enerflex Systems Ltd.		051009		
Tag #	Tag Description	Tag Status	P / ID	
Stage 2		Valve Selected		
ASME Code	Fluid State	Resolved Area	Rupture Disk Coeff.	NACE
ASME Sec. VIII	Gas (Volume)	0.065011 in ²	No Rupture Disk, 1	No
Operating Pressure	Set Pressure	Constant Back P.	Variable Back P.	Cold Diff. Test P.
1000 PSIG	1292 PSIG	0 PSIG	0 PSIG	1304.9 PSIG
Operating Temp.	Relief Temp.	Operating to Set %	Over Pressure	Percent Over P.
350 °F	350 °F	77.399 %	129.2 PSIG	10 %

Selection Warning: selected valve not valid for Kd parameter.



Dimensions

Weight	Dimension A	Dimension B
8 lb	11 1/2 in	1 3/4 in
Dimension C		
3 3/4 in		

Farris 27CA33-M20

API Letter	API Area	ASME Area
		0.068 in ²

	Size	Rating	Facing
Inlet:	1.00 in		MNPT
Outlet:	1.00 in		FNPT

Valve Design	Cap Constrn	Test Gag
Conventional	Plain	No
Max. Rel. Cap.	React. Force	Noise
2.2227 M ft ³ /day	116.4 lbs	105.72 dBa

Materials

Body (1)	Bonnet (2)
316 ss	Carbon Steel
Nozzle (1)	Disc (3)
316 ss	316 ss
Guide (4)	Spring (13)
316 ss	316 ss