Semiconductor Equipment Company ㈜진성이엔지	VENDOR PRINT	DOC. NO.	J1-IN-DS--1001-0002
		REV. NO.	G
		PAGE	COVER

SPECIFICATION AND CALCULATION SHEET

(DOC. NO. : J1-IN-DS-1001-0002)

RUPTURE DISC

PROJECT NAME : JI PROJECT
CLIENT : JINSUNG ENG CO., LTD.
LOCATION : GOESAN, KOREA
VENDOR : INSTPIA SYSTEM CO., LTD.

REV NO.	DATE	DESCRIPTION	PREP'N	REVIEW	APPROVAL
G	2024.6.01	FOR APPROVAL	D.S SHIN		Y.G CHA
F	2024.5.14	FOR APPROVAL	D.S SHIN		Y.G CHA
E	2024.3.19	FOR APPROVAL	D.S SHIN		Y.G CHA
D	2024.1.16	FOR APPROVAL	D.S SHIN		Y.G CHA
C	2023.9.04	FOR APPROVAL	D.S SHIN		Y.G CHA
B	2023.8.05	FOR APPROVAL	D.S SHIN		Y.G CHA
A	2023.7.01	FOR APPROVAL	D.S SHIN		Y.G CHA

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[1]	[2]	[3]
1	Tag. No.	RD-1101A(PG-1102A)	RD-1101B(PG-1102B)	RD-1103A(PG-1104A)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1101A INLET	PSV-1101B INLET	PSV-1103A INLET
4	P&ID No. / Piping Class	J1-PID-1101 / BA1	J1-PID-1101 / BA1	J1-PID-1101 / AF3
5	Line Size & Rating	2" / ANSI 300# R.F	2" / ANSI 300# R.F	3" / ANSI 150# F.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	R1 / GAS	R1 / GAS	R2 / GAS
8	Req'd capatity	5,217 kg/hr	5,217 kg/hr	10,312 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	External Fire	External Fire	External Fire
11	MAWP			
12	Oper. Press.	785 kPa	785 kPa	0.147 MPa
13	Set. Burst Press.	981 kPa	981 kPa	0.49 MPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.771	0.771	0.916
21	Specific Heat Ratio (C_p/C_v)	1.089	1.089	1.206
22	Oper. Temp.	40 ℃	40 ℃	50 ℃
23	Relieving Temp.	51.3 ℃	51.3 ℃	129.6 ℃
24	MW/SG	116.5	116.5	40
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	2 in	2 in	3 in
28	KOSHA Cert. type	RS II 1	RS II 1	RS III 1
29	Material - Disc	316LSS	316LSS	316LSS+PFA Liner
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	3.14 in²	3.14 in²	7.07 in²
33	Rated capacity	27,375.98 kg/hr	27,375.98 kg/hr	16,604.79 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Bolted type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	BF(Bolted Flat Seat Single type)
36	Flange Size / Rating	2" / ANSI 300# R.F	2" / ANSI 300# R.F	3" / ANSI 150# F.F
37	Material - Holder - up	316SS	316SS	316SS+PFA Coating
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS+PFA Coating
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)	Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H HDG)	Stud Bolts & Nuts_(B7/2H HDG)	Stud Bolts & Nuts_(B7/2H HDG)
44	Accessory 7			
45	Dwg. No.	RRK-FS-001	RRK-FS-001	RRK-BF-001

* NOTE

I	28-May-24	R. Jung	J. H. Jung
REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[4]	[5]	[6]
1	Tag. No.	RD-1103B(PG-1104B)	RD-1124(PG-1125)	RD-1131A(PG-1139A)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1103B INLET	PSV-1124 INLET	PSV-1131A INLET
4	P&ID No. / Piping Class	J1-PID-1101 / AF3	J1-PID-1103 / AF3	J1-PID-1104 / AF3
5	Line Size & Rating	3" / ANSI 150# F.F	1" / ANSI 150# F.F	1-1/2" / ANSI 150# F.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	R2 / GAS	H2 / GAS	H2 / GAS
8	Req'd capatity	10,312 kg/hr	914 kg/hr	5,877 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	External Fire	External Fire	External Fire
11	MAWP			
12	Oper. Press.	0.147 MPa	9.8 kPa	49 kPa
13	Set. Burst Press.	0.49 MPa	490 kPa	490 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.916	0.854	0.709
21	Specific Heat Ratio (C_p/C_v)	1.206	1.062	1.211
22	Oper. Temp.	50 ℃	50 ℃	50 ℃
23	Relieving Temp.	129.6 ℃	169.4 ℃	224.7 ℃
24	MW/SG	40	255.9	273.1
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	3 in	1 in	1.5 in
28	KOSHA Cert. type	RS III 1	RS I 1	RS II 1
29	Material - Disc	316LSS+PFA Liner	316LSS+PFA Liner	316LSS+PFA Liner
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	7.07 in²	0.79 in²	1.77 in²
33	Rated capacity	16,604.79 kg/hr	4,405.93 kg/hr	11,089.13 kg/hr
	HOLDER SPEC.			
34	Type	Bolted type	Bolted type	Bolted type
35	Model	BF(Bolted Flat Seat Single type)	BF(Bolted Flat Seat Single type)	BF(Bolted Flat Seat Single type)
36	Flange Size / Rating	3" / ANSI 150# F.F	1" / ANSI 150# F.F	1-1/2" / ANSI 150# F.F
37	Material - Holder - up	316SS+PFA Coating	316SS+PFA Coating	316SS+PFA Coating
	Material - Holder - middle			
	Material - Holder - down	316SS+PFA Coating	316SS+PFA Coating	316SS+PFA Coating
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H HDG)	Stud Bolts & Nuts_(B7/2H HDG)	Stud Bolts & Nuts_(B7/2H HDG)
44	Accessory 7			
45	Dwg. No.	RRK-BF-001	RRK-BF-001	RRK-BF-001

* NOTE

I	28-May-24	R. Jung	J. H. Jung
REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[7]	[8]	[9]
1	Tag. No.		RD-1131B(PG-1139B)	RD-1137(PG-1138)	RD-1201A(PG-1203A)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1131B INLET	PSV-1137A INLET	PSV-1201A INLET
4	P&ID No. / Piping Class		J1-PID-1104 / AF3	J1-PID-1104 / AF3	J1-PID-1201A / AB1
5	Line Size & Rating		1-1/2" / ANSI 150# F.F	2" / ANSI 150# F.F	2" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H2 / GAS	H2 / GAS	H2 / GAS
8	Req'd capatity		5,877 kg/hr	8,639 kg/hr	4,405 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	External Fire
11	MAWP				
12	Oper. Press.		49 kPa	0 kPa	9.8 kPa
13	Set. Burst Press.		490 kPa	490 kPa	490 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.709	0.841	0.841
21	Specific Heat Ratio (C_p/C_v)		1.211	1.058	1.058
22	Oper. Temp.		50 ℃	50 ℃	50 ℃
23	Relieving Temp.		224.7 ℃	176.3 ℃	176.3 ℃
24	MW/SG		273.1	273.6	273.6
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		1.5 in	2 in	2 in
28	KOSHA Cert. type		RS II 1	RS II 1	RS II 1
29	Material	Disc	316LSS+PFA Liner	316LSS+PFA Liner	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		1.77 in²	3.14 in²	3.14 in²
33	Rated capacity		11,089.13 kg/hr	18,165.4 kg/hr	18,165.4 kg/hr
	HOLDER SPEC.				
34	Type		Bolted type	Bolted type	Quick Insert type
35	Model		BF(Bolted Flat Seat Single type)	BF(Bolted Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1-1/2" / ANSI 150# F.F	2" / ANSI 150# F.F	2" / ANSI 150# R.F
37	Material	Holder - up	316SS+PFA Coating	316SS+PFA Coating	316SS
		Holder - middle			
		Holder - down	316SS+PFA Coating	316SS+PFA Coating	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H HDG)	Stud Bolts & Nuts_(B7/2H HDG)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-BF-001	RRK-BF-001	RRK-FS-003

* NOTE

I	28-May-24	R. Jung	J. H. Jung
REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[10]	[11]	[12]
1	Tag. No.	RD-1201B(PG-1203B)	RD-1201C(PG-1203C)	RD-1201D(PG-1203D)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1201B INLET	PSV-1201C INLET	PSV-1201D INLET
4	P&ID No. / Piping Class	J1-PID-1201A / AB1	J1-PID-1201C / AB1	J1-PID-1201C / AB1
5	Line Size & Rating	2" / ANSI 150# R.F	2" / ANSI 150# R.F	2" / ANSI 150# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	H2 / GAS	H2 / GAS	H2 / GAS
8	Req'd capatity	4,405 kg/hr	4,405 kg/hr	4,405 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	External Fire	External Fire	External Fire
11	MAWP			
12	Oper. Press.	9.8 kPa	9.8 kPa	9.8 kPa
13	Set. Burst Press.	490 kPa	490 kPa	490 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.841	0.841	0.841
21	Specific Heat Ratio (C_p/C_v)	1.058	1.058	1.058
22	Oper. Temp.	50 ℃	50 ℃	50 ℃
23	Relieving Temp.	176.3 ℃	176.3 ℃	176.3 ℃
24	MW/SG	273.6	273.6	273.6
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	2 in	2 in	2 in
28	KOSHA Cert. type	RS II 1	RS II 1	RS II 1
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	3.14 in²	3.14 in²	3.14 in²
33	Rated capacity	18,165.4 kg/hr	18,165.4 kg/hr	18,165.4 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	2" / ANSI 150# R.F	2" / ANSI 150# R.F	2" / ANSI 150# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

I	28-May-24	R. Jung	J. H. Jung
REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[13]	[14]	[15]
1	Tag. No.		RD-1202A	RD-1202B	RD-1202C
2	Quantity		1 SET	1 SET	1 SET
3	Service		R-1201A VENT	R-1201B VENT	R-1201C VENT
4	P&ID No. / Piping Class		J1-PID-1201A / AA1	J1-PID-1201B / AA1	J1-PID-1201C / AA1
5	Line Size & Rating		4" / ANSI 150# R.F	4" / ANSI 150# R.F	4" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		R1,H2 / GAS	R1,H2 / GAS	R1,H2 / GAS
8	Req'd capatity		19,970 kg/hr	19,970 kg/hr	19,970 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	External Fire
11	MAWP				
12	Oper. Press.		20 kPa	20 kPa	20 kPa
13	Set. Burst Press.		98 kPa	98 kPa	98 kPa
14	Burst. Tolerance		±0.015 Mpa	±0.015 Mpa	±0.015 Mpa
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		0 kPa	0 kPa	0 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		1	1	1
21	Specific Heat Ratio (C_p/C_v)		1.4	1.4	1.4
22	Oper. Temp.		40~50 ℃	40~50 ℃	40~50 ℃
23	Relieving Temp.		123 ℃	123 ℃	123 ℃
24	MW/SG		276.7	276.7	276.7
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		4 in	4 in	4 in
28	KOSHA Cert. type				
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		12.57 in²	12.57 in²	12.57 in²
33	Rated capacity		24,999.26 kg/hr	24,999.26 kg/hr	24,999.26 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		4" / ANSI 150# R.F	4" / ANSI 150# R.F	4" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
39	Accessory 2		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
40	Accessory 3		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
41	Accessory 4				
42	Accessory 5				
43	Accessory 6				
44	Accessory 7				
45	Dwg. No.		RRK-FS-002	RRK-FS-002	RRK-FS-002

* NOTE

I	28-May-24	R. Jung	J. H. Jung
REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[16]	[17]	[18]
1	Tag. No.		RD-1202D	RD-1202E	RD-1211A(PG-1212A)
2	Quantity		1 SET	1 SET	1 SET
3	Service		R-1201D VENT	R-1201E VENT	PSV-1211A INLET
4	P&ID No. / Piping Class		J1-PID-1201D / AA1	J1-PID-1201E / AA1	J1-PID-1202A / AB1
5	Line Size & Rating		4" / ANSI 150# R.F	4" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		R1,H2 / GAS	R1,H2 / GAS	H-2312 / GAS
8	Req'd capatity		19,970 kg/hr	19,970 kg/hr	1,917 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	Cooling Medium Failure
11	MAWP				
12	Oper. Press.		20 kPa	20 kPa	19 kPa
13	Set. Burst Press.		98 kPa	98 kPa	490 kPa
14	Burst. Tolerance		±0.015 Mpa	±0.015 Mpa	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		0 kPa	0 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		1	1	0.839
21	Specific Heat Ratio (C_p/C_v)		1.4	1.4	1.113
22	Oper. Temp.		40~50 ℃	40~50 ℃	50 ℃
23	Relieving Temp.		123 ℃	123 ℃	177.3 ℃
24	MW/SG		276.7	276.7	276.2
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		4 in	4 in	1 in
28	KOSHA Cert. type				RS I 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		12.57 in²	12.57 in²	0.79 in²
33	Rated capacity		24,999.26 kg/hr	24,999.26 kg/hr	4,287.39 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		4" / ANSI 150# R.F	4" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Jack Screws_(304SS)	Jack Screws_(304SS)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4				Preassembly Screws_(304SS)
42	Accessory 5				Jack Screws_(304SS)
43	Accessory 6				Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-002	RRK-FS-002	RRK-FS-003

* NOTE

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REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[19]	[20]	[21]
1	Tag. No.		RD-1211B(PG-1212B)	RD-1211C(PG-1212C)	RD-1211D(PG-1212D)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1211B INLET	PSV-1211C INLET	PSV-1211D INLET
4	P&ID No. / Piping Class		J1-PID-1202A / AB1	J1-PID-1202B / AB1	J1-PID-1202B / AB1
5	Line Size & Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H-2312 / GAS	H-2312 / GAS	H-2312 / GAS
8	Req'd capatity		1,917 kg/hr	1,917 kg/hr	1,917 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		Cooling Medium Failure	Cooling Medium Failure	Cooling Medium Failure
11	MAWP				
12	Oper. Press.		19 kPa	19 kPa	19 kPa
13	Set. Burst Press.		490 kPa	490 kPa	490 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.839	0.839	0.839
21	Specific Heat Ratio (C_p/C_v)		1.113	1.113	1.113
22	Oper. Temp.		50 ℃	50 ℃	50 ℃
23	Relieving Temp.		177.3 ℃	177.3 ℃	177.3 ℃
24	MW/SG		276.2	276.2	276.2
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		1 in	1 in	1 in
28	KOSHA Cert. type		RS I 1	RS I 1	RS I 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.79 in²	0.79 in²	0.79 in²
33	Rated capacity		4,287.39 kg/hr	4,287.39 kg/hr	4,287.39 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[22]	[23]	[24]
1	Tag. No.		RD-1211E(PG-1212E)	RD-1211F(PG-1212F)	RD-1211G(PG-1212G)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1211E INLET	PSV-1211F INLET	PSV-1211G INLET
4	P&ID No. / Piping Class		J1-PID-1202C / AB1	J1-PID-1202C / AB1	J1-PID-1202D / AB1
5	Line Size & Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H-2312 / GAS	H-2312 / GAS	H-2312 / GAS
8	Req'd capatity		1,917 kg/hr	1,917 kg/hr	1,917 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		Cooling Medium Failure	Cooling Medium Failure	Cooling Medium Failure
11	MAWP				
12	Oper. Press.		19 kPa	19 kPa	19 kPa
13	Set. Burst Press.		490 kPa	490 kPa	490 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.839	0.839	0.839
21	Specific Heat Ratio (C_p/C_v)		1.113	1.113	1.113
22	Oper. Temp.		50 ℃	50 ℃	50 ℃
23	Relieving Temp.		177.3 ℃	177.3 ℃	177.3 ℃
24	MW/SG		276.2	276.2	276.2
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		1 in	1 in	1 in
28	KOSHA Cert. type		RS I 1	RS I 1	RS I 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.79 in²	0.79 in²	0.79 in²
33	Rated capacity		4,287.39 kg/hr	4,287.39 kg/hr	4,287.39 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[25]	[26]	[27]
1	Tag. No.	RD-1211H(PG-1212H)	RD-1211I(PG-1212I)	RD-1211J(PG-1212J)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1211H INLET	PSV-1211I INLET	PSV-1211J INLET
4	P&ID No. / Piping Class	J1-PID-1202D / AB1	J1-PID-1202E / AB1	J1-PID-1202E / AB1
5	Line Size & Rating	1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	H-2312 / GAS	H-2312 / GAS	H-2312 / GAS
8	Req'd capatity	1,917 kg/hr	1,917 kg/hr	1,917 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	Cooling Medium Failure	Cooling Medium Failure	Cooling Medium Failure
11	MAWP			
12	Oper. Press.	19 kPa	19 kPa	19 kPa
13	Set. Burst Press.	490 kPa	490 kPa	490 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.839	0.839	0.839
21	Specific Heat Ratio (C_p/C_v)	1.113	1.113	1.113
22	Oper. Temp.	50 ℃	50 ℃	50 ℃
23	Relieving Temp.	177.3 ℃	177.3 ℃	177.3 ℃
24	MW/SG	276.2	276.2	276.2
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	1 in	1 in	1 in
28	KOSHA Cert. type	RS I 1	RS I 1	RS I 1
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	0.79 in²	0.79 in²	0.79 in²
33	Rated capacity	4,287.39 kg/hr	4,287.39 kg/hr	4,287.39 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[28]	[29]	[30]
1	Tag. No.		RD-1222A(PG-1227A)	RD-1222B(PG-1227B)	RD-1223A(PG-1228A)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1222A INLET	PSV-1222B INLET	PSV-1223A INLET
4	P&ID No. / Piping Class		J1-PID-1203 / AB1	J1-PID-1203 / AB1	J1-PID-1203 / AB1
5	Line Size & Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H4 / GAS	H4 / GAS	H4 / GAS
8	Req'd capatity		1,328 kg/hr	1,328 kg/hr	1,198 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	External Fire
11	MAWP				
12	Oper. Press.		50 kPa	50 kPa	0 kPa
13	Set. Burst Press.		490 kPa	490 kPa	490 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.839	0.839	0.839
21	Specific Heat Ratio (C_p/C_v)		1.058	1.058	1.058
22	Oper. Temp.		50 ℃	50 ℃	40 ℃
23	Relieving Temp.		177.3 ℃	177.3 ℃	177.3 ℃
24	MW/SG		276.3	276.3	276.3
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		1 in	1 in	1 in
28	KOSHA Cert. type		RS I 1	RS I 1	RS I 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.79 in²	0.79 in²	0.79 in²
33	Rated capacity		4,564.06 kg/hr	4,564.06 kg/hr	4,564.06 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[31]	[32]	[33]
1	Tag. No.		RD-1223B(PG-1228B)	RD-1225A(PG-1229A)	RD-1225B(PG-1229B)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1223B INLET	PSV-1225A INLET	PSV-1225B INLET
4	P&ID No. / Piping Class		J1-PID-1203 / AB1	J1-PID-1203 / AB1	J1-PID-1203 / AB1
5	Line Size & Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H4 / GAS	H4 / GAS	H4 / GAS
8	Req'd capatity		1,198 kg/hr	1,329 kg/hr	1,329 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	External Fire
11	MAWP				
12	Oper. Press.		0 kPa	0 kPa	0 kPa
13	Set. Burst Press.		490 kPa	490 kPa	490 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.839	0.838	0.838
21	Specific Heat Ratio (C_p/C_v)		1.058	1.031	1.031
22	Oper. Temp.		40 ℃	50 ℃	50 ℃
23	Relieving Temp.		177.3 ℃	215.6 ℃	215.6 ℃
24	MW/SG		276.3	391.8	391.8
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		1 in	1 in	1 in
28	KOSHA Cert. type		RS I 1	RS I 1	RS I 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.79 in²	0.79 in²	0.79 in²
33	Rated capacity		4,564.06 kg/hr	5,172.1 kg/hr	5,172.1 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[34]	[35]	[36]
1	Tag. No.	RD-1302A(PG-1305A)	RD-1302B(PG-1305B)	RD-1303(PG-1309)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1302A INLET	PSV-1302B INLET	PSV-1303 INLET
4	P&ID No. / Piping Class	J1-PID-1301 / AB1	J1-PID-1301 / AB1	J1-PID-1301 / AB1
5	Line Size & Rating	1-1/2" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F	3/4" / ANSI 150# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	H2 / GAS	H2 / GAS	H4 / GAS
8	Req'd capatity	1,954 kg/hr	1,954 kg/hr	337 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	External Fire	External Fire	CW Failure
11	MAWP			
12	Oper. Press.	9.8 kPa	9.8 kPa	49 kPa
13	Set. Burst Press.	186 kPa	186 kPa	490 kPa
14	Burst. Tolerance	±0.015 Mpa	±0.015 Mpa	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.837	0.837	0.86
21	Specific Heat Ratio (C_p/C_v)	1.031	1.031	1.054
22	Oper. Temp.	50 ℃	50 ℃	88 ℃
23	Relieving Temp.	214.5 ℃	214.5 ℃	86.5 ℃
24	MW/SG	391.4	391.4	162.3
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	1.5 in	1.5 in	0.75 in
28	KOSHA Cert. type	RS II 1	RS II 1	RS I 1
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	1.77 in²	1.77 in²	0.44 in²
33	Rated capacity	5,478.05 kg/hr	5,478.05 kg/hr	2,006.13 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	1-1/2" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F	3/4" / ANSI 150# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~300kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~300kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-003	RRK-FS-003	RRK-FS-003

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[37]	[38]	[39]
1	Tag. No.		RD-1312A(PG-1312A)	RD-1312B(PG-1312B)	RD-1322A(PG-1322A)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1312A INLET	PSV-1312B INLET	PSV-1322A INLET
4	P&ID No. / Piping Class		J1-PID-1302 / AB1	J1-PID-1302 / AB1	J1-PID-1303 / AB1
5	Line Size & Rating		3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		P1 / GAS	P1 / GAS	P1 / GAS
8	Req'd capatity		436.1 kg/hr	436.1 kg/hr	768 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	External Fire
11	MAWP				
12	Oper. Press.		314 kPa	314 kPa	314 kPa
13	Set. Burst Press.		490 kPa	490 kPa	490 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.948	0.948	0.86
21	Specific Heat Ratio (C_p/C_v)		1.065	1.065	1.103
22	Oper. Temp.		10 ℃	10 ℃	40 ℃
23	Relieving Temp.		200.7 ℃	200.7 ℃	86.6 ℃
24	MW/SG		162.3	162.3	162.3
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		0.75 in	0.75 in	0.75 in
28	KOSHA Cert. type		RS I 1	RS I 1	RS I 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.44 in²	0.44 in²	0.44 in²
33	Rated capacity		1,810.38 kg/hr	1,810.38 kg/hr	2,208.46 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[40]	[41]	[42]
1	Tag. No.	RD-1322B(PG-1322B)	RD-1322C(PG-1322C)	RD-1332A(PG-1332A)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1322B INLET	PSV-1322C INLET	PSV-1332A INLET
4	P&ID No. / Piping Class	J1-PID-1303 / AB1	J1-PID-1303 / AB1	J1-PID-1304A / AB1
5	Line Size & Rating	3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	P1 / GAS	P1 / GAS	P1 / GAS
8	Req'd capatity	768 kg/hr	768 kg/hr	1,309 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	External Fire	External Fire	External Fire
11	MAWP			
12	Oper. Press.	314 kPa	314 kPa	309 kPa
13	Set. Burst Press.	490 kPa	490 kPa	490 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.86	0.86	0.827
21	Specific Heat Ratio (C_p/C_v)	1.103	1.103	1.055
22	Oper. Temp.	40 ℃	40 ℃	80 ℃
23	Relieving Temp.	86.6 ℃	86.6 ℃	66.1 ℃
24	MW/SG	162.3	162.3	162
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	0.75 in	0.75 in	1 in
28	KOSHA Cert. type	RS I 1	RS I 1	RS I 1
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	0.44 in²	0.44 in²	0.79 in²
33	Rated capacity	2,208.46 kg/hr	2,208.46 kg/hr	4,056.12 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-003	RRK-FS-003	RRK-FS-003

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[43]	[44]	[45]
1	Tag. No.		RD-1332B(PG-1332B)	RD-1333(PG-1335)	RD-1334A(PG-1336A)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1332B INLET	PSV-1333 INLET	PSV-1334A INLET
4	P&ID No. / Piping Class		J1-PID-1304B / AB1	J1-PID-1304A / AB1	J1-PID-1304A / AB1
5	Line Size & Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		P1 / GAS	P1 / GAS	P1 / GAS
8	Req'd capatity		1,309 kg/hr	896 kg/hr	896 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	Thermal Expansion
11	MAWP				
12	Oper. Press.		309 kPa	314 kPa	314 kPa
13	Set. Burst Press.		490 kPa	490 kPa	490 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.827	0.837	0.837
21	Specific Heat Ratio (C_p/C_v)		1.055	1.056	1.056
22	Oper. Temp.		80 ℃	40 ℃	40 ℃
23	Relieving Temp.		66.1 ℃	66 ℃	66 ℃
24	MW/SG		162	162	162
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		1 in	1 in	1 in
28	KOSHA Cert. type		RS I 1	RS I 1	RS I 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.79 in²	0.79 in²	0.79 in²
33	Rated capacity		4,056.12 kg/hr	4,032.41 kg/hr	3,719.34 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[46]	[47]	[48]
1	Tag. No.	RD-1334B(PG-1336B)	RD-1334C(PG-1336C)	RD-1334D(PG-1336D)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1334B INLET	PSV-1334C INLET	PSV-1334D INLET
4	P&ID No. / Piping Class	J1-PID-1304A / AB1	J1-PID-1304B / AB1	J1-PID-1304B / AB1
5	Line Size & Rating	1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	P1 / GAS	P1 / GAS	P1 / GAS
8	Req'd capatity	896 kg/hr	896 kg/hr	896 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	Thermal Expansion	External Fire	External Fire
11	MAWP			
12	Oper. Press.	314 kPa	314 kPa	314 kPa
13	Set. Burst Press.	490 kPa	490 kPa	490 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.837	0.837	0.837
21	Specific Heat Ratio (C_p/C_v)	1.056	1.056	1.056
22	Oper. Temp.	40 ℃	40 ℃	40 ℃
23	Relieving Temp.	66 ℃	66 ℃	66 ℃
24	MW/SG	162	162	162
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	1 in	1 in	1 in
28	KOSHA Cert. type	RS I 1	RS I 1	RS I 1
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	0.79 in²	0.79 in²	0.79 in²
33	Rated capacity	3,719.34 kg/hr	4,032.41 kg/hr	4,032.41 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	1" / ANSI 150# R.F	1" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-003	RRK-FS-003	RRK-FS-003

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[49]	[50]	[51]
1	Tag. No.	RD-1347A(PG-1348A)	RD-1347B(PG-1348B)	RD-1301A(PG-1306A)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1347A INLET	PSV-1347B INLET	PSV-1301A INLET
4	P&ID No. / Piping Class	J1-PID-1305A / AB1	J1-PID-1305 / AB1	J1-PID-1301 / AB1
5	Line Size & Rating	1-1/2" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F	1" / ANSI 150# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	P1 / GAS	P1 / GAS	H2 / GAS
8	Req'd capatity	1,859 kg/hr	1,859 kg/hr	738 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	External Fire	External Fire	External Fire
11	MAWP			
12	Oper. Press.	314 kPa	314 kPa	49 kPa
13	Set. Burst Press.	490 kPa	490 kPa	490 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0	0	0
20	Compress Factor Z @Operat. Cond	0.837	0.837	0.878
21	Specific Heat Ratio (C_p/C_v)	1.056	1.056	1.055
22	Oper. Temp.	40 ℃	40 ℃	120 ℃
23	Relieving Temp.	66 ℃	66 ℃	179.4 ℃
24	MW/SG	162.3	162.3	133.7
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	1.5 in	1.5 in	1 in
28	KOSHA Cert. type	RS II 1	RS II 1	RS I 1
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	1.77 in²	1.77 in²	0.79 in²
33	Rated capacity	9,081.32 kg/hr	9,081.32 kg/hr	3,096.36 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	1-1/2" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F	1" / ANSI 150# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

I	28-May-24	R. Jung	J. H. Jung
REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[52]	[53]	[54]
1	Tag. No.		RD-1301B(PG-1306B)	RD-1221A(PG-1226A)	RD-1221B(PG-1226B)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1301B INLET	PSV-1221A INLET	PSV-1221B INLET
4	P&ID No. / Piping Class		J1-PID-1301 / AB1	J1-PID-1203 / AB1	J1-PID-1203 / AB1
5	Line Size & Rating		1" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H2 / GAS	H4 / GAS	H4 / GAS
8	Req'd capatity		738 kg/hr	2,018 kg/hr	2,018 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	External Fire
11	MAWP				
12	Oper. Press.		49 kPa	0 kPa	0 kPa
13	Set. Burst Press.		490 kPa	186 kPa	186 kPa
14	Burst. Tolerance		±5 %	±0.015 Mpa	±0.015 Mpa
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0
20	Compress Factor Z @Operat. Cond		0.878	0.875	0.875
21	Specific Heat Ratio (C_p/C_v)		1.055	1.04	1.04
22	Oper. Temp.		120 ℃	50 ℃	50 ℃
23	Relieving Temp.		179.4 ℃	209.1 ℃	209.1 ℃
24	MW/SG		133.7	337.8	337.8
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		1 in	1.5 in	1.5 in
28	KOSHA Cert. type		RS I 1	RS II 1	RS II 1
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.79 in²	1.77 in²	1.77 in²
33	Rated capacity		3,096.36 kg/hr	5,020.9 kg/hr	5,020.9 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F	1-1/2" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~300kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~300kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[55]	[56]	[57]
1	Tag. No.		RD-1338(PG-1337)	RD-1319(PG-1314)	RD-1344A(PG-1344A)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1338 INLET	PSV-1319 INLET	PSV-1344A INLET
4	P&ID No. / Piping Class		J1-PID-1304B / AB1	J1-PID-1302 / AB1	J1-PID-1305A / AB1
5	Line Size & Rating		3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F	1/2" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		P1 / GAS	P1 / GAS	C4F6 / LIQUID
8	Req'd capatity		525 kg/hr	123 kg/hr	7 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		External Fire	External Fire	Outlet Blocked
11	MAWP				
12	Oper. Press.		314 kPa	49 kPa	1.95 kg/cm²
13	Set. Burst Press.		490 kPa	490 kPa	735.5 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	9.8 kPa	1.95 kg/cm²
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0	0	0.5
20	Compress Factor Z @Operat. Cond		0.923	0.86	1
21	Specific Heat Ratio (C_p/C_v)		1.05	1.054	0
22	Oper. Temp.		80 ℃	5 ℃	10 ℃
23	Relieving Temp.		153.4 ℃	86.5 ℃	10 ℃
24	MW/SG		169.9	162.3	1.11
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		0.75 in	0.75 in	0.5 in
28	KOSHA Cert. type		RS I 1	RS I 1	
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.44 in²	0.44 in²	0.2 in²
33	Rated capacity		1,966.29 kg/hr	2,174.99 kg/hr	10,302.12 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		3/4" / ANSI 150# R.F	3/4" / ANSI 150# R.F	1/2" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-003	RRK-FS-003	RRK-FS-003

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[58]	[59]	[60]
1	Tag. No.	RD-1344B(PG-1344B)	RD-1345A(PG-1345A)	RD-1345B(PG-1345B)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1344B INLET	PSV-1345A INLET	PSV-1345B INLET
4	P&ID No. / Piping Class	J1-PID-1305A / AB1	J1-PID-1305A / AB1	J1-PID-1305A / AB1
5	Line Size & Rating	1/2" / ANSI 150# R.F	1/2" / ANSI 300# R.F	1/2" / ANSI 300# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	C4F6 / LIQUID	VR / LIQUID	VR / LIQUID
8	Req'd capatity	7 kg/hr	1.8 kg/hr	1.8 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	Outlet Blocked	Outlet Blocked	Outlet Blocked
11	MAWP			
12	Oper. Press.	1.95 kg/cm²	2,131 kPa	2,131 kPa
13	Set. Burst Press.	735.5 kPa	2,942 kPa	2,942 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	1.95 kg/cm²	0.1 kg/cm²	0.1 kg/cm²
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0.5	0.5	0.5
20	Compress Factor Z @Operat. Cond	1	1	1
21	Specific Heat Ratio (C_p/C_v)	0	1.4	1.4
22	Oper. Temp.	10 ℃	10 ℃	10 ℃
23	Relieving Temp.	10 ℃	10 ℃	10 ℃
24	MW/SG	1.11	1.11	1.11
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRSR	KSRSR
26	Type	Reverse Dome/Shear type	Reverse Dome/Scored type	Reverse Dome/Scored type
27	Size	0.5 in	0.5 in	0.5 in
28	KOSHA Cert. type			
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	0.2 in²	0.2 in²	0.2 in²
33	Rated capacity	10,302.12 kg/hr	23,463.6 kg/hr	23,463.6 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	1/2" / ANSI 150# R.F	1/2" / ANSI 300# R.F	1/2" / ANSI 300# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)	Pressure Gauge_(316SS, NPT-1/2, 0~5Mpa)	Pressure Gauge_(316SS, NPT-1/2, 0~5Mpa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-003	RSR-FS-001	RSR-FS-001

* NOTE

I	28-May-24	R. Jung	J. H. Jung
REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[1]	[2]	[3]
1	Tag. No.	RD-1101C(PG-1102C)	RD-1101D(PG-1102D)	RD-1101F(PG-1102F)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1101C INLET	PSV-1101D INLET	PSV-1101F INLET
4	P&ID No. / Piping Class	J1-PID-1101 / BA1	J1-PID-1101 / BA1	J1-PID-1101 / BA1
5	Line Size & Rating	1/2" / ANSI 300# R.F	1/2" / ANSI 300# R.F	1/2" / ANSI 300# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	CTFE / LIQUID	CTFE / LIQUID	CTFE / LIQUID
8	Req'd capatity	5.8 kg/hr	5.8 kg/hr	5.5 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	Outlet Blocked	Outlet Blocked	Outlet Blocked
11	MAWP			
12	Oper. Press.	727 kPa	727 kPa	727 kPa
13	Set. Burst Press.	892 kPa	892 kPa	892 kPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	677 kPa	677 kPa	9.8 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	1	1	1
20	Compress Factor Z @Operat. Cond	1	1	1
21	Specific Heat Ratio (C_p/C_v)	0	0	0
22	Oper. Temp.	20 ℃	20 ℃	20 ℃
23	Relieving Temp.	35 ℃	35 ℃	35 ℃
24	MW/SG	1.3	1.3	1.3
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	0.5 in	0.5 in	0.5 in
28	KOSHA Cert. type			
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	0.2 in²	0.2 in²	0.2 in²
33	Rated capacity	7,714.46 kg/hr	7,714.46 kg/hr	13,850.58 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	1/2" / ANSI 300# R.F	1/2" / ANSI 300# R.F	1/2" / ANSI 300# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)	Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)	Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5	Jack Screws_(304SS)	Jack Screws_(304SS)	Jack Screws_(304SS)
43	Accessory 6	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)	Stud Bolts & Nuts_(B7/2H)
44	Accessory 7			
45	Dwg. No.	RRK-FS-004	RRK-FS-004	RRK-FS-004

* NOTE

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REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[4]	[5]	[6]
1	Tag. No.		RD-1101G(PG-1102G)	RD-1231A(PG-1231A)	RD-1231B(PG-1231B)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1101G INLET	PSV-1231A INLET	PSV-1231B INLET
4	P&ID No. / Piping Class		J1-PID-1101 / BA1	J1-PID-1202A / AB1	J1-PID-1202A / AB1
5	Line Size & Rating		1/2" / ANSI 300# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		CTFE / LIQUID	H-2312 / LIQUID	H-2312 / LIQUID
8	Req'd capatity		5.5 kg/hr	19.1 kg/hr	19.1 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		Outlet Blocked	Outlet Blocked	Outlet Blocked
11	MAWP				
12	Oper. Press.		727 kPa	21.57 kPa	21.57 kPa
13	Set. Burst Press.		892 kPa	0.667 MPa	0.667 MPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa	21.57 kPa	21.57 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		1	0.623	0.623
20	Compress Factor Z @Operat. Cond		1	1	1
21	Specific Heat Ratio (C_p/C_v)		0	0	0
22	Oper. Temp.		20 ℃	95 ℃	95 ℃
23	Relieving Temp.		35 ℃	105 ℃	105 ℃
24	MW/SG		1.3	MW:276.3 / SG: 2.25	MW:276.3 / SG: 2.25
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		0.5 in	0.5 in	0.5 in
28	KOSHA Cert. type				
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.2 in²	0.2 in²	0.2 in²
33	Rated capacity		13,850.58 kg/hr	15,828.62 kg/hr	15,828.62 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1/2" / ANSI 300# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1.5Mpa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5		Jack Screws_(304SS)		
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)		
44	Accessory 7				
45	Dwg. No.		RRK-FS-004	RRK-FS-005	RRK-FS-005

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION	[7]	[8]	[9]
1	Tag. No.	RD-1231C(PG-1231C)	RD-1231D(PG-1231D)	RD-1231E(PG-1231E)
2	Quantity	1 SET	1 SET	1 SET
3	Service	PSV-1231C INLET	PSV-1231D INLET	PSV-1231E INLET
4	P&ID No. / Piping Class	J1-PID-1202B / AB1	J1-PID-1202B / AB1	J1-PID-1202C / AB1
5	Line Size & Rating	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F
	DESIGN CONDITION			
6	Applied code or STD.	API RP520	API RP520	API RP520
7	Fluid & State	H-2312 / LIQUID	H-2312 / LIQUID	H-2312 / LIQUID
8	Req'd capatity	19.1 kg/hr	19.1 kg/hr	19.1 kg/hr
9	Prim or Secondary or Combination	Combination	Combination	Combination
10	Application	Outlet Blocked	Outlet Blocked	Outlet Blocked
11	MAWP			
12	Oper. Press.	21.57 kPa	21.57 kPa	21.57 kPa
13	Set. Burst Press.	0.667 MPa	0.667 MPa	0.667 MPa
14	Burst. Tolerance	±5 %	±5 %	±5 %
15	Manufacturing Range	0%	0%	0%
16	Vacuum Oper./ Max.			
17	Const. Back Press.	21.57 kPa	21.57 kPa	21.57 kPa
18	Press Static or Puls.	Static	Static	Static
19	Viscosity @Operat. Cond (cP)	0.623	0.623	0.623
20	Compress Factor Z @Operat. Cond	1	1	1
21	Specific Heat Ratio (C_p/C_v)	0	0	0
22	Oper. Temp.	95 ℃	95 ℃	95 ℃
23	Relieving Temp.	105 ℃	105 ℃	105 ℃
24	MW/SG	MW:276.3 / SG: 2.25	MW:276.3 / SG: 2.25	MW:276.3 / SG: 2.25
	RUPTURE DISC SPEC.			
25	Model	KSRRK	KSRRK	KSRRK
26	Type	Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size	0.5 in	0.5 in	0.5 in
28	KOSHA Cert. type			
29	Material - Disc	316LSS	316LSS	316LSS
	Material - Seal			
	Material - Vac. Support			
30	Coating inlet / outlet			
31	Q'ty per Ass'y	5 / Tag	5 / Tag	5 / Tag
32	Discharge Area	0.2 in²	0.2 in²	0.2 in²
33	Rated capacity	15,828.62 kg/hr	15,828.62 kg/hr	15,828.62 kg/hr
	HOLDER SPEC.			
34	Type	Quick Insert type	Quick Insert type	Quick Insert type
35	Model	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F
37	Material - Holder - up	316SS	316SS	316SS
	Material - Holder - middle			
	Material - Holder - down	316SS	316SS	316SS
	ACCESSORIES			
38	Accessory 1	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5			
43	Accessory 6			
44	Accessory 7			
45	Dwg. No.	RRK-FS-005	RRK-FS-005	RRK-FS-005

* NOTE

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REV. NO.	DATE	DES'D	APP'D

FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[10]	[11]	[12]
1	Tag. No.		RD-1231F(PG-1231F)	RD-1231G(PG-1231G)	RD-1231H(PG-1231H)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1231F INLET	PSV-1231G INLET	PSV-1231H INLET
4	P&ID No. / Piping Class		J1-PID-1202C / AB1	J1-PID-1202D / AB1	J1-PID-1202D / AB1
5	Line Size & Rating		1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H-2312 / LIQUID	H-2312 / LIQUID	H-2312 / LIQUID
8	Req'd capatity		19.1 kg/hr	19.1 kg/hr	19.1 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		Outlet Blocked	Outlet Blocked	Outlet Blocked
11	MAWP				
12	Oper. Press.		21.57 kPa	21.57 kPa	21.57 kPa
13	Set. Burst Press.		0.667 MPa	0.667 MPa	0.667 MPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		21.57 kPa	21.57 kPa	21.57 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0.623	0.623	0.623
20	Compress Factor Z @Operat. Cond		1	1	1
21	Specific Heat Ratio (C_p/C_v)		0	0	0
22	Oper. Temp.		95 ℃	95 ℃	95 ℃
23	Relieving Temp.		105 ℃	105 ℃	105 ℃
24	MW/SG		MW:276.3 / SG: 2.25	MW:276.3 / SG: 2.25	MW:276.3 / SG: 2.25
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRRK
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Shear type
27	Size		0.5 in	0.5 in	0.5 in
28	KOSHA Cert. type				
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.2 in²	0.2 in²	0.2 in²
33	Rated capacity		15,828.62 kg/hr	15,828.62 kg/hr	15,828.62 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5				
43	Accessory 6				
44	Accessory 7				
45	Dwg. No.		RRK-FS-005	RRK-FS-005	RRK-FS-005

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[13]	[14]	[15]
1	Tag. No.		RD-1231I(PG-1231I)	RD-1231J(PG-1231J)	RD-1345C(PG-1345C)
2	Quantity		1 SET	1 SET	1 SET
3	Service		PSV-1231I INLET	PSV-1231J INLET	PSV-1345C INLET
4	P&ID No. / Piping Class		J1-PID-1202E / AB1	J1-PID-1202E / AB1	J1-PID-1305A / BA1
5	Line Size & Rating		1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 300# R.F
	DESIGN CONDITION				
6	Applied code or STD.		API RP520	API RP520	API RP520
7	Fluid & State		H-2312 / LIQUID	H-2312 / LIQUID	C4F6 / LIQUID
8	Req'd capatity		19.1 kg/hr	19.1 kg/hr	1.54 kg/hr
9	Prim or Secondary or Combination		Combination	Combination	Combination
10	Application		Outlet Blocked	Outlet Blocked	Outlet Blocked
11	MAWP				
12	Oper. Press.		21.57 kPa	21.57 kPa	2,131 kPa
13	Set. Burst Press.		0.667 MPa	0.667 MPa	2,942 kPa
14	Burst. Tolerance		±5 %	±5 %	±5 %
15	Manufacturing Range		0%	0%	0%
16	Vacuum Oper./ Max.				
17	Const. Back Press.		21.57 kPa	21.57 kPa	9.8 kPa
18	Press Static or Puls.		Static	Static	Static
19	Viscosity @Operat. Cond (cP)		0.623	0.623	0.5
20	Compress Factor Z @Operat. Cond		1	1	1
21	Specific Heat Ratio (C_p/C_v)		0	0	0
22	Oper. Temp.		95 ℃	95 ℃	10 ℃
23	Relieving Temp.		105 ℃	105 ℃	35 ℃
24	MW/SG		MW:276.3 / SG: 2.25	MW:276.3 / SG: 2.25	1.3
	RUPTURE DISC SPEC.				
25	Model		KSRRK	KSRRK	KSRSR
26	Type		Reverse Dome/Shear type	Reverse Dome/Shear type	Reverse Dome/Scored type
27	Size		0.5 in	0.5 in	0.5 in
28	KOSHA Cert. type				
29	Material	Disc	316LSS	316LSS	316LSS
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag	5 / Tag	5 / Tag
32	Discharge Area		0.2 in²	0.2 in²	0.2 in²
33	Rated capacity		15,828.62 kg/hr	15,828.62 kg/hr	25,379.14 kg/hr
	HOLDER SPEC.				
34	Type		Quick Insert type	Quick Insert type	Quick Insert type
35	Model		FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)	FS(Insert Flat Seat Single type)
36	Flange Size / Rating		1/2" / ANSI 150# R.F	1/2" / ANSI 150# R.F	1/2" / ANSI 300# R.F
37	Material	Holder - up	316SS	316SS	316SS
		Holder - middle			
		Holder - down	316SS	316SS	316SS
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~1000kPa)	Pressure Gauge_(316SS, NPT-1/2, 0~0.6MPa)
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)	Excess Flow Valve_(316SS, NPT-1/2)
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)	Nipple & Tee_(316SS, NPT-1/4x1/2)
41	Accessory 4		Preassembly Screws_(304SS)	Preassembly Screws_(304SS)	Preassembly Screws_(304SS)
42	Accessory 5				Jack Screws_(304SS)
43	Accessory 6				Stud Bolts & Nuts_(B7/2H)
44	Accessory 7				
45	Dwg. No.		RRK-FS-005	RRK-FS-005	RSR-FS-002

* NOTE

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FDC RUPTURE DISC SPECIFICATION SHEET

PROJECT : J1 PROJECT CUSTOMER : JINSUNG ENG CO., LTD.

	GENERAL DESCRIPTION		[16]	[ ]	[ ]
1	Tag. No.		RD-1345D(PG-1345D)		
2	Quantity		1 SET		
3	Service		PSV-1345D INLET		
4	P&ID No. / Piping Class		J1-PID-1305A / BA1		
5	Line Size & Rating		1/2" / ANSI 300# R.F		
	DESIGN CONDITION				
6	Applied code or STD.		API RP520		
7	Fluid & State		C4F6 / LIQUID		
8	Req'd capatity		1.54 kg/hr		
9	Prim or Secondary or Combination		Combination		
10	Application		Outlet Blocked		
11	MAWP				
12	Oper. Press.		2,131 kPa		
13	Set. Burst Press.		2,942 kPa		
14	Burst. Tolerance		±5 %		
15	Manufacturing Range		0%		
16	Vacuum Oper./ Max.				
17	Const. Back Press.		9.8 kPa		
18	Press Static or Puls.		Static		
19	Viscosity @Operat. Cond (cP)		0.5		
20	Compress Factor Z @Operat. Cond		1		
21	Specific Heat Ratio (C_p/C_v)		0		
22	Oper. Temp.		10 ℃		
23	Relieving Temp.		35 ℃		
24	MW/SG		1.3		
	RUPTURE DISC SPEC.				
25	Model		KSRSR		
26	Type		Reverse Dome/Scored type		
27	Size		0.5 in		
28	KOSHA Cert. type				
29	Material	Disc	316LSS		
		Seal			
		Vac. Support			
30	Coating inlet / outlet				
31	Q'ty per Ass'y		5 / Tag		
32	Discharge Area		0.2 in²		
33	Rated capacity		25,379.14 kg/hr		
	HOLDER SPEC.				
34	Type		Quick Insert type		
35	Model		FS(Insert Flat Seat Single type)		
36	Flange Size / Rating		1/2" / ANSI 300# R.F		
37	Material	Holder - up	316SS		
		Holder - middle			
		Holder - down	316SS		
	ACCESSORIES				
38	Accessory 1		Pressure Gauge_(316SS, NPT-1/2, 0~0.6MPa)		
39	Accessory 2		Excess Flow Valve_(316SS, NPT-1/2)		
40	Accessory 3		Nipple & Tee_(316SS, NPT-1/4x1/2)		
41	Accessory 4		Preassembly Screws_(304SS)		
42	Accessory 5		Jack Screws_(304SS)		
43	Accessory 6		Stud Bolts & Nuts_(B7/2H)		
44	Accessory 7				
45	Dwg. No.		RSR-FS-002		

* NOTE

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R1 / GAS
JOB NO.	220701	TAG. NO.	RD-1101A(PG-1102A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	981 kPa	x 0.145 =	142.28 PSIG
Relieving Pressure (P_{01})	142.28 PSIG	x 1.21 =	172.16 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	172.16 PSIG	+ 14.7 =	186.86 PSIA
Relieving temperature of the Inlet. Rankine(T)	51.3 ℃	(℃ + 273.15) x 1.8 =	584.01 R
Flow Required (W)	5,217 kg/hr	x 2.205 =	11,501.51 lb/hr
Mol. Weight(M)	116.5		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{11{,}501.514}{326 \times 0.62 \times 1 \times 186.86 \times 1} \quad 1.966 = 0.6 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.59868856}{\pi}} = 0.87 \text{ inch} \quad (\quad 22 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 2 in

RECOMMENDED SIZE BY VENDOR : 2 in

*** NOTE**

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Rev. No.	DES'D	APP'D	Date

FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R1 / GAS
JOB NO.	220701	TAG. NO.	RD-1101B(PG-1102B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	981 kPa	x 0.145 =	142.28 PSIG
Relieving Pressure (P_{01})	142.28 PSIG	x 1.21 =	172.16 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	172.16 PSIG	+ 14.7 =	186.86 PSIA
Relieving temperature of the Inlet. Rankine(T)	51.3 ℃	(℃ + 273.15) x 1.8 =	584.01 R
Flow Required (W)	5,217 kg/hr	x 2.205 =	11,501.51 lb/hr
Mol. Weight(M)	116.5		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{11{,}501.514}{326 \times 0.62 \times 1 \times 186.86 \times 1} \quad 1.966 = 0.6 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.59868856}{\pi}} = 0.87 \text{ inch} \quad (\quad 22 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 2 in

RECOMMENDED SIZE BY VENDOR : 2 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R2 / GAS
JOB NO.	220701	TAG. NO.	RD-1103A(PG-1104A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	0.49 MPa	x 145.0377 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	129.6 ℃	(℃ + 273.15) x 1.8 =	724.95 R
Flow Required (W)	10,312 kg/hr	x 2.205 =	22,734.06 lb/hr
Mol. Weight(M)	40		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{22{,}734.064}{338 \times 0.62 \times 1 \times 100.69 \times 1} = 4.0745 = 4.39 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 4.38977055}{\pi}} = 2.36 \text{ inch} \quad (\quad 60 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 3 in

RECOMMENDED SIZE BY VENDOR : 3 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R2 / GAS
JOB NO.	220701	TAG. NO.	RD-1103B(PG-1104B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	0.49 MPa	x 145.0377 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	129.6 ℃	(℃ + 273.15) x 1.8 =	724.95 R
Flow Required (W)	10,312 kg/hr	x 2.205 =	22,734.06 lb/hr
Mol. Weight(M)	40		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{22{,}734.064}{338 \times 0.62 \times 1 \times 100.69 \times 1} = 4.0745 = 4.39 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 4.38977055}{\pi}} = 2.36 \text{ inch} \quad (\quad 60 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 3 in

RECOMMENDED SIZE BY VENDOR : 3 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1124(PG-1125)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	169.4 ℃	(℃ + 273.15) x 1.8 =	796.59 R
Flow Required (W)	914 kg/hr	x 2.205 =	2,015.02 lb/hr
Mol. Weight(M)	255.9		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}015.025}{323 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.6305 = 0.16 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.16292913}{\pi}} = 0.46 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1131A(PG-1139A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	224.7 ℃	(℃ + 273.15) x 1.8 =	896.13 R
Flow Required (W)	5,877 kg/hr	x 2.205 =	12,956.56 lb/hr
Mol. Weight(M)	273.1		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{12{,}956.565}{338 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5253 = 0.94 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.93654924}{\pi}} = 1.09 \text{ inch} \quad (\quad 28 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1131B(PG-1139B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	224.7 ℃	(℃ + 273.15) x 1.8 =	896.13 R
Flow Required (W)	5,877 kg/hr	x 2.205 =	12,956.56 lb/hr
Mol. Weight(M)	273.1		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{12{,}956.565}{338 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5253 = 0.94 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.93654924}{\pi}} = 1.09 \text{ inch} \quad (\quad 28 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
Rev. No.	DES'D	APP'D	Date

F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1137(PG-1138)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	176.3 ℃	(℃ + 273.15) x 1.8 =	809.01 R
Flow Required (W)	8,639 kg/hr	x 2.205 =	19,045.73 lb/hr
Mol. Weight(M)	273.6		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{19{,}045.731}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5769 = 1.49 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 1.49406106}{\pi}} = 1.38 \text{ inch} \quad (\quad 35 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 2 in

RECOMMENDED SIZE BY VENDOR : 2 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1201A(PG-1203A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	176.3 ℃	(℃ + 273.15) x 1.8 =	809.01 R
Flow Required (W)	4,405 kg/hr	x 2.205 =	9,711.36 lb/hr
Mol. Weight(M)	273.6		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{9{,}711.361}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5769 = 0.76 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.76181722}{\pi}} = 0.98 \text{ inch} \quad (\quad 25 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 2 in

RECOMMENDED SIZE BY VENDOR : 2 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1201B(PG-1203B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	176.3 ℃	(℃ + 273.15) x 1.8 =	809.01 R
Flow Required (W)	4,405 kg/hr	x 2.205 =	9,711.36 lb/hr
Mol. Weight(M)	273.6		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{9{,}711.361}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5769 = 0.76 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.76181722}{\pi}} = 0.98 \text{ inch} \quad (\quad 25 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 2 in

RECOMMENDED SIZE BY VENDOR : 2 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1201C(PG-1203C)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	176.3 ℃	(℃ + 273.15) x 1.8 =	809.01 R
Flow Required (W)	4,405 kg/hr	x 2.205 =	9,711.36 lb/hr
Mol. Weight(M)	273.6		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{9{,}711.361}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5769 = 0.76 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.76181722}{\pi}} = 0.98 \text{ inch} \quad (\quad 25 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 2 in

RECOMMENDED SIZE BY VENDOR : 2 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1201D(PG-1203D)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	176.3 ℃	(℃ + 273.15) x 1.8 =	809.01 R
Flow Required (W)	4,405 kg/hr	x 2.205 =	9,711.36 lb/hr
Mol. Weight(M)	273.6		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{9{,}711.361}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5769 = 0.76 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.76181722}{\pi}} = 0.98 \text{ inch} \quad (\quad 25 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 2 in

RECOMMENDED SIZE BY VENDOR : 2 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R1,H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1202A

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	98 kPa	x 0.145 =	14.21 PSIG
Relieving Pressure (P_{01})	14.21 PSIG	x 1.21 =	17.2 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	17.2 PSIG	+ 14.7 =	31.9 PSIA
Relieving temperature of the Inlet. Rankine(T)	123 ℃	(℃ + 273.15) x 1.8 =	713.07 R
Flow Required (W)	19,970 kg/hr	x 2.205 =	44,026.31 lb/hr
Mol. Weight(M)	276.7		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{44{,}026.306}{356 \times 0.62 \times 1 \times 31.9 \times 1} \quad 1.6053 = 10.04 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 10.03831549}{\pi}} = 3.58 \text{ inch} \quad (\quad 91 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 4 in

RECOMMENDED SIZE BY VENDOR : 4 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R1,H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1202B

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	98 kPa	x 0.145 =	14.21 PSIG
Relieving Pressure (P_{01})	14.21 PSIG	x 1.21 =	17.2 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	17.2 PSIG	+ 14.7 =	31.9 PSIA
Relieving temperature of the Inlet. Rankine(T)	123 ℃	(℃ + 273.15) x 1.8 =	713.07 R
Flow Required (W)	19,970 kg/hr	x 2.205 =	44,026.31 lb/hr
Mol. Weight(M)	276.7		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{44{,}026.306}{356 \times 0.62 \times 1 \times 31.9 \times 1} \quad 1.6053 = 10.04 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 10.03831549}{\pi}} = 3.58 \text{ inch} \quad (\quad 91 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 4 in

RECOMMENDED SIZE BY VENDOR : 4 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R1,H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1202C

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	98 kPa	x 0.145 =	14.21 PSIG
Relieving Pressure (P_{01})	14.21 PSIG	x 1.21 =	17.2 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	17.2 PSIG	+ 14.7 =	31.9 PSIA
Relieving temperature of the Inlet. Rankine(T)	123 ℃	(℃ + 273.15) x 1.8 =	713.07 R
Flow Required (W)	19,970 kg/hr	x 2.205 =	44,026.31 lb/hr
Mol. Weight(M)	276.7		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{44{,}026.306}{356 \times 0.62 \times 1 \times 31.9 \times 1} \quad 1.6053 = 10.04 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 10.03831549}{\pi}} = 3.58 \text{ inch} \quad (\quad 91 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 4 in

RECOMMENDED SIZE BY VENDOR : 4 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R1,H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1202D

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	98 kPa	x 0.145 =	14.21 PSIG
Relieving Pressure (P_{01})	14.21 PSIG	x 1.21 =	17.2 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	17.2 PSIG	+ 14.7 =	31.9 PSIA
Relieving temperature of the Inlet. Rankine(T)	123 ℃	(℃ + 273.15) x 1.8 =	713.07 R
Flow Required (W)	19,970 kg/hr	x 2.205 =	44,026.31 lb/hr
Mol. Weight(M)	276.7		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{44{,}026.306}{356 \times 0.62 \times 1 \times 31.9 \times 1} \quad 1.6053 = 10.04 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 10.03831549}{\pi}} = 3.58 \text{ inch} \quad (\quad 91 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 4 in

RECOMMENDED SIZE BY VENDOR : 4 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	R1,H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1202E

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	98 kPa	x 0.145 =	14.21 PSIG
Relieving Pressure (P_{01})	14.21 PSIG	x 1.21 =	17.2 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	17.2 PSIG	+ 14.7 =	31.9 PSIA
Relieving temperature of the Inlet. Rankine(T)	123 ℃	(℃ + 273.15) x 1.8 =	713.07 R
Flow Required (W)	19,970 kg/hr	x 2.205 =	44,026.31 lb/hr
Mol. Weight(M)	276.7		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{44{,}026.306}{356 \times 0.62 \times 1 \times 31.9 \times 1} \quad 1.6053 = 10.04 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 10.03831549}{\pi}} = 3.58 \text{ inch} \quad (\quad 91 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 4 in

RECOMMENDED SIZE BY VENDOR : 4 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211A(PG-1212A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211B(PG-1212B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211C(PG-1212C)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211D(PG-1212D)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
Rev. No.	DES'D	APP'D	Date

F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211E(PG-1212E)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
Rev. No.	DES'D	APP'D	Date

FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211F(PG-1212F)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211G(PG-1212G)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211H(PG-1212H)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211I(PG-1212I)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / GAS
JOB NO.	220701	TAG. NO.	RD-1211J(PG-1212J)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,917 kg/hr	x 2.205 =	4,226.26 lb/hr
Mol. Weight(M)	276.2		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}226.261}{328 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.5694 = 0.35 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.35117139}{\pi}} = 0.67 \text{ inch} \quad (\quad 17 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1222A(PG-1227A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,328 kg/hr	x 2.205 =	2,927.74 lb/hr
Mol. Weight(M)	276.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}927.738}{322 \times 0.62 \times 1 \times 100.69 \times 1}\ 1.5691 = 0.23 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.22852627}{\pi}} = 0.54 \text{ inch} \quad (\ 14 \ \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1222B(PG-1227B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,328 kg/hr	x 2.205 =	2,927.74 lb/hr
Mol. Weight(M)	276.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}927.738}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.5691 = 0.23 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.22852627}{\pi}} = 0.54 \text{ inch} \quad (\quad 14 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1223A(PG-1228A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,198 kg/hr	x 2.205 =	2,641.14 lb/hr
Mol. Weight(M)	276.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}641.137}{322 \times 0.62 \times 1 \times 100.69 \times 1}\ 1.5691 = 0.21 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.20615548}{\pi}} = 0.51 \text{ inch} \quad (\ 13\ \text{mm}\ )$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1223B(PG-1228B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	177.3 ℃	(℃ + 273.15) x 1.8 =	810.81 R
Flow Required (W)	1,198 kg/hr	x 2.205 =	2,641.14 lb/hr
Mol. Weight(M)	276.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}641.137}{322 \times 0.62 \times 1 \times 100.69 \times 1}\ 1.5691 = 0.21 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.20615548}{\pi}} = 0.51 \text{ inch} \quad (\ 13\ \text{mm}\ )$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1225A(PG-1229A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	215.6 ℃	(℃ + 273.15) x 1.8 =	879.75 R
Flow Required (W)	1,329 kg/hr	x 2.205 =	2,929.94 lb/hr
Mol. Weight(M)	391.8		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}929.943}{319 \times 0.62 \times 1 \times 100.69 \times 1}\ 1.3717 = 0.2 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.20181227}{\pi}} = 0.51 \text{ inch} \quad (\ 13 \ \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1225B(PG-1229B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	215.6 ℃	(℃ + 273.15) x 1.8 =	879.75 R
Flow Required (W)	1,329 kg/hr	x 2.205 =	2,929.94 lb/hr
Mol. Weight(M)	391.8		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}929.943}{319 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.3717 = 0.2 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.20181227}{\pi}} = 0.51 \text{ inch} \quad (\quad 13 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1302A(PG-1305A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	186 kPa	x 0.145 =	26.98 PSIG
Relieving Pressure (P_{01})	26.98 PSIG	x 1.21 =	32.64 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	32.64 PSIG	+ 14.7 =	47.34 PSIA
Relieving temperature of the Inlet. Rankine(T)	214.5 ℃	(℃ + 273.15) x 1.8 =	877.77 R
Flow Required (W)	1,954 kg/hr	x 2.205 =	4,307.83 lb/hr
Mol. Weight(M)	391.4		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}307.832}{319 \times 0.62 \times 1 \times 47.34 \times 1}\ 1.3701 = 0.63 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.63033403}{\pi}} = 0.9 \text{ inch} \quad (\ 23 \ \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1302B(PG-1305B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	186 kPa	x 0.145 =	26.98 PSIG
Relieving Pressure (P_{01})	26.98 PSIG	x 1.21 =	32.64 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	32.64 PSIG	+ 14.7 =	47.34 PSIA
Relieving temperature of the Inlet. Rankine(T)	214.5 ℃	(℃ + 273.15) x 1.8 =	877.77 R
Flow Required (W)	1,954 kg/hr	x 2.205 =	4,307.83 lb/hr
Mol. Weight(M)	391.4		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}307.832}{319 \times 0.62 \times 1 \times 47.34 \times 1}\ 1.3701 = 0.63 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.63033403}{\pi}} = 0.9 \text{ inch} \quad (\ 23 \ \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1303(PG-1309)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	86.5 ℃	(℃ + 273.15) x 1.8 =	647.37 R
Flow Required (W)	337 kg/hr	x 2.205 =	742.96 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{742.958}{322 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.8521 = 0.07 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.07421342}{\pi}} = 0.31 \text{ inch} \quad (\quad 8 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1312A(PG-1312A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	200.7 ℃	(℃ + 273.15) x 1.8 =	852.93 R
Flow Required (W)	436.1 kg/hr	x 2.205 =	961.44 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{961.436}{323 \times 0.62 \times 1 \times 100.69 \times 1} \quad 2.232 = 0.11 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.10642141}{\pi}} = 0.37 \text{ inch} \quad (\quad 9 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1312B(PG-1312B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	200.7 ℃	(℃ + 273.15) x 1.8 =	852.93 R
Flow Required (W)	436.1 kg/hr	x 2.205 =	961.44 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{961.436}{323 \times 0.62 \times 1 \times 100.69 \times 1} \quad 2.232 = 0.11 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.10642141}{\pi}} = 0.37 \text{ inch} \quad (\quad 9 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1322A(PG-1322A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	86.6 ℃	(℃ + 273.15) x 1.8 =	647.55 R
Flow Required (W)	768 kg/hr	x 2.205 =	1,693.15 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}693.15}{327 \times 0.62 \times 1 \times 100.69 \times 1}\ 1.8524 = 0.15 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.1536328}{\pi}} = 0.44 \text{ inch} \quad (\ 11\ \text{mm}\ )$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1322B(PG-1322B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	86.6 ℃	(℃ + 273.15) x 1.8 =	647.55 R
Flow Required (W)	768 kg/hr	x 2.205 =	1,693.15 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}693.15}{327 \times 0.62 \times 1 \times 100.69 \times 1}\ 1.8524 = 0.15 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.1536328}{\pi}} = 0.44 \text{ inch} \quad (\ 11\ \text{mm}\ )$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1322C(PG-1322C)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	86.6 ℃	(℃ + 273.15) x 1.8 =	647.55 R
Flow Required (W)	768 kg/hr	x 2.205 =	1,693.15 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}693.15}{327 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.8524 = 0.15 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.1536328}{\pi}} = 0.44 \text{ inch} \quad (\quad 11 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1332A(PG-1332A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	66.1 ℃	(℃ + 273.15) x 1.8 =	610.65 R
Flow Required (W)	1,309 kg/hr	x 2.205 =	2,885.85 lb/hr
Mol. Weight(M)	162		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}885.85}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.7656 = 0.25 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.25346561}{\pi}} = 0.57 \text{ inch} \quad (\quad 14 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1332B(PG-1332B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	66.1 ℃	(℃ + 273.15) x 1.8 =	610.65 R
Flow Required (W)	1,309 kg/hr	x 2.205 =	2,885.85 lb/hr
Mol. Weight(M)	162		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{2{,}885.85}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.7656 = 0.25 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.25346561}{\pi}} = 0.57 \text{ inch} \quad (\quad 14 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1333(PG-1335)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	66 ℃	(℃ + 273.15) x 1.8 =	610.47 R
Flow Required (W)	896 kg/hr	x 2.205 =	1,975.34 lb/hr
Mol. Weight(M)	162		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}975.342}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.776 = 0.17 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.17451524}{\pi}} = 0.47 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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F D C CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1334A(PG-1336A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	66 ℃	(℃ + 273.15) x 1.8 =	610.47 R
Flow Required (W)	896 kg/hr	x 2.205 =	1,975.34 lb/hr
Mol. Weight(M)	162		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}975.342}{322 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.776 = 0.19 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.1892046}{\pi}} = 0.49 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1334B(PG-1336B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.1 =	78.18 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	78.18 PSIG	+ 14.7 =	92.88 PSIA
Relieving temperature of the Inlet. Rankine(T)	66 ℃	(℃ + 273.15) x 1.8 =	610.47 R
Flow Required (W)	896 kg/hr	x 2.205 =	1,975.34 lb/hr
Mol. Weight(M)	162		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}975.342}{322 \times 0.62 \times 1 \times 92.88 \times 1} \quad 1.776 = 0.19 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.1892046}{\pi}} = 0.49 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1334C(PG-1336C)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	66 ℃	(℃ + 273.15) x 1.8 =	610.47 R
Flow Required (W)	896 kg/hr	x 2.205 =	1,975.34 lb/hr
Mol. Weight(M)	162		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}975.342}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.776 = 0.17 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.17451524}{\pi}} = 0.47 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1334D(PG-1336D)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	66 ℃	(℃ + 273.15) x 1.8 =	610.47 R
Flow Required (W)	896 kg/hr	x 2.205 =	1,975.34 lb/hr
Mol. Weight(M)	162		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}975.342}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.776 = 0.17 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.17451524}{\pi}} = 0.47 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1347A(PG-1348A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	66 ℃	(℃ + 273.15) x 1.8 =	610.47 R
Flow Required (W)	1,859 kg/hr	x 2.205 =	4,098.39 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}098.393}{322 \times 0.62 \times 1 \times 100.69 \times 1}\ 1.7743 = 0.36 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.36174538}{\pi}} = 0.68 \text{ inch} \quad (\ 17 \ \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1347B(PG-1348B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	66 ℃	(℃ + 273.15) x 1.8 =	610.47 R
Flow Required (W)	1,859 kg/hr	x 2.205 =	4,098.39 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}098.393}{322 \times 0.62 \times 1 \times 100.69 \times 1}\sqrt{1.7743} = 0.36 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.36174538}{\pi}} = 0.68 \text{ inch} \quad (\ 17 \ \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1301A(PG-1306A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	179.4 ℃	(℃ + 273.15) x 1.8 =	814.59 R
Flow Required (W)	738 kg/hr	x 2.205 =	1,627.01 lb/hr
Mol. Weight(M)	133.7		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}627.011}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 2.3129 = 0.19 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.18719551}{\pi}} = 0.49 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

I	R. Jung	J. H. Jung	28-May-24
Rev. No.	DES'D	APP'D	Date

FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H2 / GAS
JOB NO.	220701	TAG. NO.	RD-1301B(PG-1306B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	179.4 ℃	(℃ + 273.15) x 1.8 =	814.59 R
Flow Required (W)	738 kg/hr	x 2.205 =	1,627.01 lb/hr
Mol. Weight(M)	133.7		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}627.011}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 2.3129 = 0.19 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.18719551}{\pi}} = 0.49 \text{ inch} \quad (\quad 12 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1 in

RECOMMENDED SIZE BY VENDOR : 1 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1221A(PG-1226A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	186 kPa	x 0.145 =	26.98 PSIG
Relieving Pressure (P_{01})	26.98 PSIG	x 1.21 =	32.64 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	32.64 PSIG	+ 14.7 =	47.34 PSIA
Relieving temperature of the Inlet. Rankine(T)	209.1 ℃	(℃ + 273.15) x 1.8 =	868.05 R
Flow Required (W)	2,018 kg/hr	x 2.205 =	4,448.93 lb/hr
Mol. Weight(M)	337.8		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}448.928}{320 \times 0.62 \times 1 \times 47.34 \times 1} \quad 1.4995 = 0.71 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.71025116}{\pi}} = 0.95 \text{ inch} \quad (\quad 24 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H4 / GAS
JOB NO.	220701	TAG. NO.	RD-1221B(PG-1226B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	186 kPa	x 0.145 =	26.98 PSIG
Relieving Pressure (P_{01})	26.98 PSIG	x 1.21 =	32.64 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	32.64 PSIG	+ 14.7 =	47.34 PSIA
Relieving temperature of the Inlet. Rankine(T)	209.1 ℃	(℃ + 273.15) x 1.8 =	868.05 R
Flow Required (W)	2,018 kg/hr	x 2.205 =	4,448.93 lb/hr
Mol. Weight(M)	337.8		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{4{,}448.928}{320 \times 0.62 \times 1 \times 47.34 \times 1} \quad 1.4995 = 0.71 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.71025116}{\pi}} = 0.95 \text{ inch} \quad (\quad 24 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 1.5 in

RECOMMENDED SIZE BY VENDOR : 1.5 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1338(PG-1337)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	153.4 ℃	(℃ + 273.15) x 1.8 =	767.79 R
Flow Required (W)	525 kg/hr	x 2.205 =	1,157.43 lb/hr
Mol. Weight(M)	169.9		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{1{,}157.427}{321 \times 0.62 \times 1 \times 100.69 \times 1} \quad 2.0423 = 0.12 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.11795694}{\pi}} = 0.39 \text{ inch} \quad (\quad 10 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	P1 / GAS
JOB NO.	220701	TAG. NO.	RD-1319(PG-1314)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.6.2 Sizing for Gas Critical Flow

Set Pressrue (P_0)	490 kPa	x 0.145 =	71.07 PSIG
Relieving Pressure (P_{01})	71.07 PSIG	x 1.21 =	85.99 PSIG
(Using set pressure plus 21% over pressure as permitted by the API code)			
Absolute Relieving Pressure (P_1)	85.99 PSIG	+ 14.7 =	100.69 PSIA
Relieving temperature of the Inlet. Rankine(T)	86.5 ℃	(℃ + 273.15) x 1.8 =	647.37 R
Flow Required (W)	123 kg/hr	x 2.205 =	271.17 lb/hr
Mol. Weight(M)	162.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A)

$$A = \frac{W}{C \times Kd \times K_R \times P_1 \times Kc}\sqrt{\frac{TZ}{M}}$$

$$A = \frac{271.169}{322 \times 0.62 \times 1 \times 100.69 \times 1} \quad 1.8521 = 0.02 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

$$\sqrt{\frac{4 \times 0.02498385}{\pi}} = 0.18 \text{ inch} \quad (\quad 5 \quad \text{mm})$$

REQUIRED SIZE BY CLIENT : 0.75 in

RECOMMENDED SIZE BY VENDOR : 0.75 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	C4F6 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1344A(PG-1344A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	735.5 kPa	x 0.145 =	106.68 PSIG
RELIEVING PRESSURE (P_1)	106.68 PSIG	x 1.1 =	117.34 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	1.95 kg/cm²	x 14.223343 =	27.73552 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98316
FLOW REQUIRED (Q)	7 kg/hr	x 0.004 =	0.03 GPM
SPECIFIC GRAVITY(G)	1.11		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.028}{38 \times 0.62 \times 1 \times 1 \times 1} \sqrt{0.1113} = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ = 0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00013341}{\pi}} = 0.01 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	C4F6 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1344B(PG-1344B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	735.5 kPa	x 0.145 =	106.68 PSIG
RELIEVING PRESSURE (P_1)	106.68 PSIG	x 1.1 =	117.34 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	1.95 kg/cm²	x 14.223343 =	27.73552 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98316
FLOW REQUIRED (Q)	7 kg/hr	x 0.004 =	0.03 GPM
SPECIFIC GRAVITY(G)	1.11		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.028}{38 \times 0.62 \times 1 \times 1 \times 1} \quad 0.1113 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00013341}{\pi}} = 0.01 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	VR / LIQUID
JOB NO.	220701	TAG. NO.	RD-1345A(PG-1345A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	2,942 kPa	x 0.145 =	426.7 PSIG
RELIEVING PRESSURE (P_1)	426.7 PSIG	x 1.1 =	469.37 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	0.1 kg/cm²	x 14.223343 =	1.42233 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.97986
FLOW REQUIRED (Q)	1.8 kg/hr	x 0.004 =	0.01 GPM
SPECIFIC GRAVITY(G)	1.11		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.007}{38 \times 0.62 \times 1 \times 1 \times 1} = 0.0487 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ = 0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.0000151}{\pi}} = 0 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	VR / LIQUID
JOB NO.	220701	TAG. NO.	RD-1345B(PG-1345B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	2,942 kPa	x 0.145 =	426.7 PSIG
RELIEVING PRESSURE (P_1)	426.7 PSIG	x 1.1 =	469.37 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	0.1 kg/cm²	x 14.223343 =	1.42233 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.97986
FLOW REQUIRED (Q)	1.8 kg/hr	x 0.004 =	0.01 GPM
SPECIFIC GRAVITY(G)	1.11		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.007}{38 \times 0.62 \times 1 \times 1 \times 1} = 0.0487 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ = 0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.0000151}{\pi}} = 0 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	CTFE / LIQUID
JOB NO.	220701	TAG. NO.	RD-1101C(PG-1102C)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	892 kPa	x 0.145 =	129.37 PSIG
RELIEVING PRESSURE (P_1)	129.37 PSIG	x 1.1 =	142.31 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	677 kPa	x 0.145038 =	98.19052 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.96949
FLOW REQUIRED (Q)	5.8 kg/hr	x 0.003 =	0.02 GPM
SPECIFIC GRAVITY(G)	1.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.02}{38 \times 0.62 \times 1 \times 1 \times 1} \quad 0.1717 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ — 0 mm

$$A = \frac{A_R}{K_V} = 0 \text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00014762}{\pi}} = 0.01 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	CTFE / LIQUID
JOB NO.	220701	TAG. NO.	RD-1101D(PG-1102D)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	892 kPa	x 0.145 =	129.37 PSIG
RELIEVING PRESSURE (P_1)	129.37 PSIG	x 1.1 =	142.31 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	677 kPa	x 0.145038 =	98.19052 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.96949
FLOW REQUIRED (Q)	5.8 kg/hr	x 0.003 =	0.02 GPM
SPECIFIC GRAVITY(G)	1.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.02}{38 \times 0.62 \times 1 \times 1 \times 1} \quad 0.1717 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ — 0 mm

$$A = \frac{A_R}{K_V} = 0 \text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00014762}{\pi}} = 0.01 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	CTFE / LIQUID
JOB NO.	220701	TAG. NO.	RD-1101F(PG-1102F)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	892 kPa	x 0.145 =	129.37 PSIG
RELIEVING PRESSURE (P_1)	129.37 PSIG	x 1.1 =	142.31 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	9.8 kPa	x 0.145038 =	1.42137 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.97406
FLOW REQUIRED (Q)	5.5 kg/hr	x 0.003 =	0.02 GPM
SPECIFIC GRAVITY(G)	1.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.019}{38 \times 0.62 \times 1 \times 1 \times 1} \quad 0.0961 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ — 0 mm

$$A = \frac{A_R}{K_V} = 0 \text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.000078}{\pi}} = 0.01 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	CTFE / LIQUID
JOB NO.	220701	TAG. NO.	RD-1101G(PG-1102G)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	892 kPa	x 0.145 =	129.37 PSIG
RELIEVING PRESSURE (P_1)	129.37 PSIG	x 1.1 =	142.31 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	9.8 kPa	x 0.145038 =	1.42137 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.97406
FLOW REQUIRED (Q)	5.5 kg/hr	x 0.003 =	0.02 GPM
SPECIFIC GRAVITY(G)	1.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.019}{38 \times 0.62 \times 1 \times 1 \times 1} \quad 0.0961 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ — 0 mm

$$A = \frac{A_R}{K_V} = 0 \text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.000078}{\pi}} = 0.01 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231A(PG-1231A)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\sqrt{0.1476} = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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B	R. Jung	J. H. Jung	28-May-24

FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231B(PG-1231B)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\sqrt{0.1476} = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231C(PG-1231C)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\ 0.1476 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ → 0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231D(PG-1231D)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\ 0.1476 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231E(PG-1231E)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\sqrt{0.1476} = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231F(PG-1231F)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\ 0.1476 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ = 0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231G(PG-1231G)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\ 0.1476 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE — $D = \sqrt{\frac{4A}{\pi}}$: 0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231H(PG-1231H)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\sqrt{0.1476} = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231I(PG-1231I)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\ 0.1476 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ → 0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	H-2312 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1231J(PG-1231J)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	0.667 MPa	x 145.0377 =	96.74 PSIG
RELIEVING PRESSURE (P_1)	96.74 PSIG	x 1.1 =	106.41 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	21.57 kPa	x 0.145038 =	3.12846 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.98824
FLOW REQUIRED (Q)	19.1 kg/hr	x 0.002 =	0.04 GPM
SPECIFIC GRAVITY(G)	2.25		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.037}{38 \times 0.62 \times 1 \times 1 \times 1}\sqrt{0.1476} = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0\text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.00023693}{\pi}} = 0.02 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	C4F6 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1345C(PG-1345C)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	2,942 kPa	x 0.145 =	426.7 PSIG
RELIEVING PRESSURE (P_1)	426.7 PSIG	x 1.1 =	469.37 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	9.8 kPa	x 0.145038 =	1.42137 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.97935
FLOW REQUIRED (Q)	1.54 kg/hr	x 0.003 =	0.01 GPM
SPECIFIC GRAVITY(G)	1.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.005}{38 \times 0.62 \times 1 \times 1 \times 1} \quad 0.0527 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE

$$D = \sqrt{\frac{4A}{\pi}}$$

0 mm

$$A = \frac{A_R}{K_V} = 0 \text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.0000119}{\pi}} = 0 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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FDC CALCULATION SHEET FOR RUPTURE DISC

PROJECT INFORMATION

CUSTOMER	JINSUNG ENG CO., LTD.	DOC. NO.	-
PROJECT	J1 PROJECT	FLUID & STATE	C4F6 / LIQUID
JOB NO.	220701	TAG. NO.	RD-1345D(PG-1345D)

CALCULATION DATA - API RP520 7EDIT. PART 1 SEC.3.8 Sizing for Liquid

SET PRESSURE (P_0)	2,942 kPa	x 0.145 =	426.7 PSIG
RELIEVING PRESSURE (P_1)	426.7 PSIG	x 1.1 =	469.37 PSIG
(Using set pressure plus 10% over pressure as permitted by the API code)			
BACK PRESSURE (P_2)	9.8 kPa	x 0.145038 =	1.42137 PSIG
CORRECTION FACTOR TO VISCOSITY(Kv)			0.97935
FLOW REQUIRED (Q)	1.54 kg/hr	x 0.003 =	0.01 GPM
SPECIFIC GRAVITY(G)	1.3		

CALCULATION RESULT

REQUIRED DISCHARGE AREA (A) — Kc =1, Kv = 1

$$A_R = \frac{Q}{38 \times Kd \times KR \times Kc \times K}\sqrt{\frac{G}{P_1-P_2}}$$

$$A_R = \frac{0.005}{38 \times 0.62 \times 1 \times 1 \times 1} = 0.0527 = 0 \text{ Sq.in}$$

THEORETICAL (BY CALCULATION) SIZE: $D = \sqrt{\frac{4A}{\pi}}$ = 0 mm

$$A = \frac{A_R}{K_V} = 0 \text{Sq.in}, \quad D = \sqrt{\frac{4 \times 0.0000119}{\pi}} = 0 \text{ inch}$$

REQUIRED SIZE BY CLIENT : 0.5 in

RECOMMENDED SIZE BY VENDOR : 0.5 in

*** NOTE**

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