



**Rockwood
Swendeman**

ROCKWOOD-SWENDEMAN **PRODUCT GUIDE**

Top quality products and solutions to support the ever-growing cryogenic market.

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ABOUT THIS CATALOG

Rockwood Swendeman offers a premiere line of safety relief valve solutions empowering the global industrial gas sector. These valves are indispensable for cryogenic tanks, piping, and any environment where cryogenic or gaseous pressures may accumulate, ensuring safe pressure release. Available in durable bronze and stainless steel configurations, our valves offer versatile applications in both liquid and gaseous cryogenic systems. From dual safety relief setups to stationary storage vessels and distribution systems, our modular design seamlessly integrates safety relief and 3-way diverter valves, presenting a hassle-free, value-added solution for tank manufacturers. Simplify installation, cut costs, and enhance safety with Rockwood Swendeman.

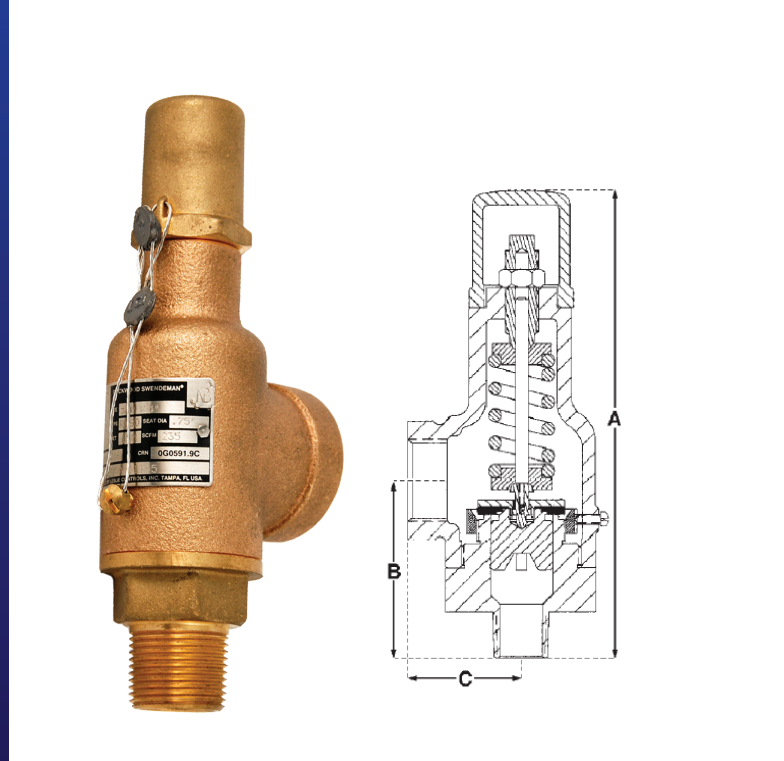
This catalog is designed to provide a comprehensive overview of CPC-Cryolab's Rockwood-Swendeman product line. Due to the continuous development and additions to our product lines, this catalog may not include all Rockwood-Swendeman products that CPC-Cryolab offers. To see any new products that have been developed after this publication visit www.cpc-cryolab.com.

This catalog is for general information only and should not be viewed as an all inclusive catalog of important technical information, regulations, warnings or installation instructions. Contact your authorized CPC-Cryolab Distributor or CPC-Cryolab for more information.

BRONZE SAFETY RELIEF VALVES

TYPE RXSO

0 to 400 PSIG



Valve Size:

Inlet: 1/2" to 2"

Outlet: 3/4" to 2-1/2"



APPLICATIONS

- Especially recommended where noxious or expensive gases or liquids place a premium on seal quality
- Stationary Cryogenic storage tanks
- Dual Safety relief systems
- Overpressure relief of tanks, pipelines, vessels, pumps
- Air and gas compressors
- Corrosive industrial applications



FEATURES

- Special PTFE seat, making bubble-tight seals possible to over 90% of set pressure per spec API 527; not applicable to steam
- Adjustable blowdown ring
- ASME UV Certified
- Cleaned and packaged for use in O₂ service in compliance with the CGA specification G-4.1

Additional cleaning specifications:

- 4WPI-SW70003 • ES.660.503
- GS-38 • GS-40

Testing:

Each valve is set, tested, re-tested and sealed at the factory to the customer's specifications.



TECHNICAL DATA

Materials of Construction:

Shell	Cast Bronze, A.S.M.E SB-62
Base	Forged Brass, Alloy C37700
Trim	Copper Alloy
Spring	Stainless Steel 17-7 PH A.S.T.M A-313, Type 631



OPERATING RANGES

Temperature	-320° F to +400° F
Relief Pressures	0 to 400 PSIG



OPTIONS

- BPS threads available on most sizes
- Lever operation



APPLICABLE CODES

Designed and manufactured to meet:

- CGA S-1.2 and S-1.3
- V-4301 (Cryogenic Non-Oxygen)
- 2014/68/EU PED (MDMT -325°F)
- CRN 0G22625.5C
- API 527
- AD-Merkblatt A2
- V-4401 (Oxygen)
- ASME sec.VIII

DIMENSIONS & CHARACTERISTICS

Air Capacity Table

Discharge capacities in cubic feet per minute of air at 10% or 3 PSI, whichever is greater, overpressure.

Inlet Sizes Inches	1/2 3/4	1/2 3/4 1	3/4 1 1-1/4	1 1-1/4 1-1/2	1-1/4 1-1/2 2
Outlet Sizes Inches	3/4 1	1 1-1/4	1-1/4 1-1/2	1-1/2 2	2 2-1/2
Seat Diameter Inches	A 0.750	B 1.000	C 1.250	D 1.500	E 2.000
Flow Area	0.118	0.204	0.326	0.424	0.628
Set Pressure					
10	36	63	100	130	193
15	43	74	118	154	227
20	48	85	136	177	262
25	55	96	154	200	297
30	62	108	172	224	332
35	70	120	192	250	370
40	77	133	212	276	408
45	84	145	232	301	446
50	91	157	252	327	485
55	98	170	271	353	523
60	105	182	291	379	561
65	113	195	311	405	599
70	120	207	331	430	638
75	127	220	351	456	676
80	134	232	371	482	714
85	141	244	391	508	752
90	149	257	410	534	791
95	156	269	430	560	829
100	163	282	450	585	867
105	170	294	470	611	905
110	177	307	490	637	944
115	184	319	510	663	982
120	192	331	530	689	1020
125	199	344	549	715	1058
130	206	356	569	740	1097
135	213	369	589	766	1135
140	220	381	609	792	1173
145	228	393	629	818	1211
150	235	406	649	844	1249
155	242	418	668	869	1288
160	249	431	688	895	1326
165	256	443	708	921	1364
170	264	456	728	947	1402
175	271	468	748	973	1441
180	278	480	768	999	1479
185	285	493	788	1024	1517
190	292	505	807	1050	1555
195	299	518	827	1076	1594
200	307	530	847	1102	1632
205	314	543	867	1128	1670

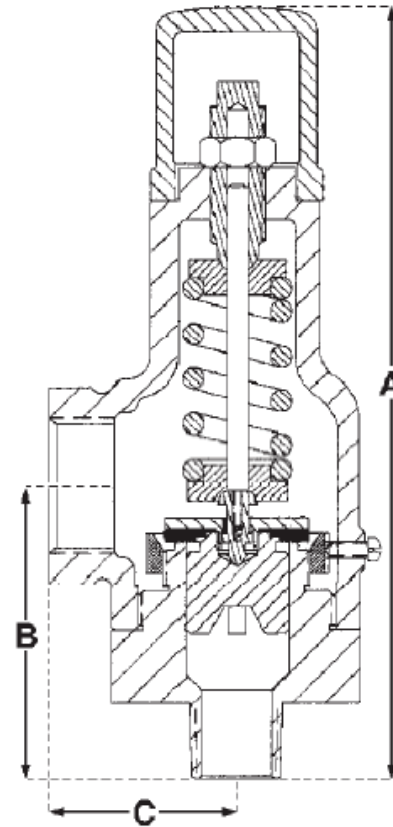
Inlet Sizes Inches	1/2 3/4	1/2 3/4 1	3/4 1 1-1/4	1 1-1/4 1-1/2	1-1/4 1-1/2 2
Outlet Sizes Inches	3/4 1	1 1-1/4	1-1/4 1-1/2	1-1/2 2	2 2-1/2
Seat Diameter Inches	A 0.750	B 1.000	C 1.250	D 1.500	E 2.000
Flow Area	0.118	0.204	0.326	0.424	0.628
Set Pressure					
210	321	555	887	1153	1708
215	328	567	907	1179	1747
220	335	580	927	1205	1785
225	343	592	946	1231	1823
230	350	605	966	1257	1861
235	357	617	986	1283	1900
240	364	629	1006	1308	1938
245	371	642	1026	1334	1976
250	378	654	1046	1360	2014
255	386	667	1066	1386	2053
260	393	679	1085	1412	2091
265	400	692	1105	1437	2129
270	407	704	1125	1463	2167
275	414	716	1145	1489	2206
280	422	729	1165	1515	2244
285	429	741	1185	1541	2282
290	436	754	1204	1567	2320
295	443	766	1224	1592	2359
300	450	779	1244	1618	2397
305	458	791	1264	1644	2435
310	465	803	1284	1670	2473
315	472	816	1304	1696	2511
320	479	828	1324	1721	2550
325	486	841	1343	1747	2588
330	493	853	1363	1773	2626
335	501	866	1383	1799	2664
340	508	878	1403	1825	2703
345	515	890	1423	1851	2741
350	522	903	1443	1876	2779
355	529	915	1463	1902	2817
360	537	928	1482	1928	2856
365	544	940	1502	1954	2894
370	551	952	1522	1980	2932
375	558	965	1542	2005	2970
380	565	977	1562	2031	3009
385	590	989	1582	2057	3047
390	580	1002	1602	2083	3085
395	587	1015	1621	2109	3123
400	594	1027	1641	2135	3162

NOTE: Pressure Settings below 15psig (1.034 barg) are non code.

DIMENSIONS & CHARACTERISTICS

RXSO	Inlet (in)	Orifice	Outlet (in)	Max P (psi)	A Overall Height	B Overall Height	C Overall Width	Weight (lb)
71**ACD	0.5	A	0.75	400	5.78	2.44	1.34	2
71**ACE	0.5	A	1	400	6.41	2.69	1.69	3
71**ADD	0.75	A	0.75	400	5.905	2.565	1.34	2
71**ADE	0.75	A	1	400	6.535	2.815	1.69	3
71**BCE	0.5	B	1	400	7.402	2.902	1.66	3
71**BCF	0.5	B	1.25	400	7.492	2.992	1.88	3
71**BDE	0.75	B	1	400	7.402	2.902	1.66	3
71**BDF	0.75	B	1.25	400	7.492	2.992	1.88	4
71**BEE	1	B	1	400	7.402	2.902	1.66	4
71**BEF	1	B	1.25	400	7.492	2.992	1.88	5
71**CDF	0.75	C	1.25	300	8.68	3.53	2.25	4
71**CDG	0.75	C	1.5	400	9.87	3.59	2.59	4
71**CEF	1	C	1.25	300	8.65	3.5	2.25	5
71**CEG	1	C	1.5	400	9.87	3.59	2.59	6
71**CFE	1.25	C	1.25	300	8.65	3.5	2.25	6
71**CFG	1.25	C	1.5	400	9.87	3.59	2.59	6
71**DEG	1	D	1.5	350	9.84	3.56	2.59	7
71**DEH	1	D	2	400	9.69	3.69	2.75	7
71**DFG	1.25	D	1.5	350	9.84	3.56	2.59	7
71**DFH	1.25	D	2	400	9.69	3.69	2.75	9
71**DGG	1.5	D	1.5	350	9.84	3.56	2.59	9
71**DGH	1.5	D	2	400	9.69	3.69	2.75	9
71**EGH	1.5	E	2	400	9.705	3.705	2.75	10
71**EGJ	1.5	E	2.5	400	9.705	4.015	2.94	10
71**EHH	2	E	2	400	9.685	3.685	2.75	10
71**EHJ	2	E	2	400	9.685	3.995	2.94	10

NOTE: Codes used for 710, 715, and 770 series



ORDERING GUIDE

SAFETY RELIEF VALVES WITH O² CLEANING

MODEL NUMBER 710 E A C D - A 025 - D S

710 - RXSO Bronze ASME coded - gas
715 - RXSO Bronze PED coded - gas
760 - RXSO-S Stainless Steel RXSO - gas
765 - RXSO-S Stainless Steel PED coded - gas
770 - RSL Bronze Non ASME coded - liquid
775 - RSL SS Non ASME coded - liquid

CAP SIZE
N - Plain Cap
E - Open Lever

ORIFICE
A - 0.750
B - 1.000
C - 1.250
D - 1.500
E - 2.000

INLET SIZE
C - 1/2"
D - 3/4"
E - 1"
F - 1-1/4"
G - 1-1/2"
H - 2"

CUSTOMER TAGS (OPTIONAL)
S - Stainless Steel Tag
T - Brass Tag

DOCUMENTATION
D - Standard (ASME)
K - KGS Certified

SET PRESSURE
 Set pressure

VALVE SERVICE (FOR SET VALVES)
A - Air/Gas Sec. VIII
N - Liquid Non Code (770 and 775 only)

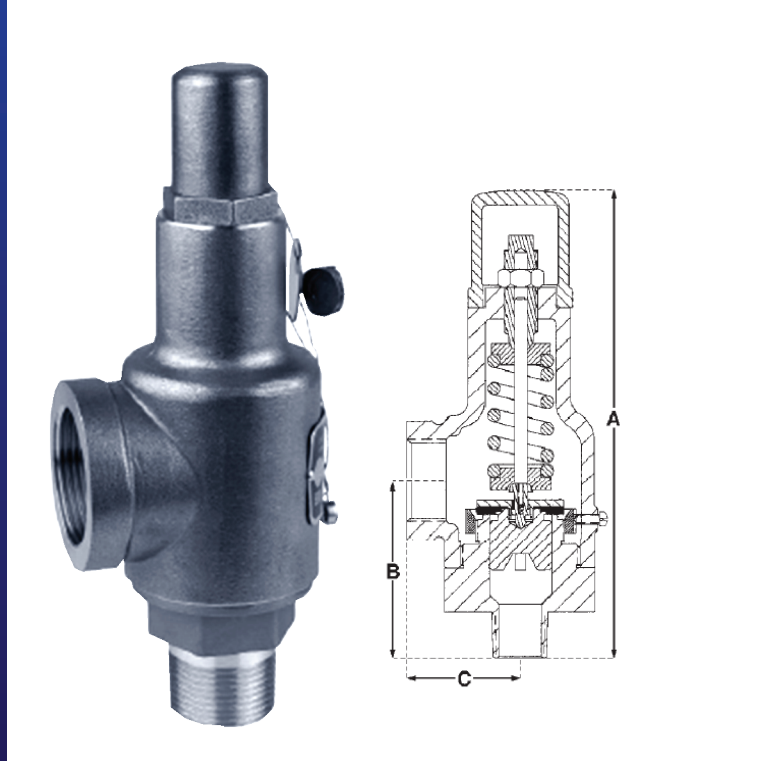
OUTLET SIZE
D - 3/4"
E - 1"
F - 1-1/4"
G - 1-1/2"
H - 2"
J - 2-1/2"

EX: 1/2" x 3/4" RXSO Bronze body ASME coded, with open lever, air/gas Sec VIII set @ 25 psi with standard documentation and stainless steel tag = 710EACD-A025-DS

STAINLESS STEEL SAFETY RELIEF VALVE

TYPE RXSO-S

0 to 400 PSIG



Valve Size:

Inlet: 1/2" to 1"

Outlet: 3/4" to 1-1/4"



APPLICATIONS

- Especially recommended where corrosive or expensive gases benefit from stainless steel construction
- Stationary Cryogenic storage tanks
- Dual Safety relief systems
- Overpressure relief of tanks, pipelines, vessels, pumps
- Air and gas compressors
- Corrosive industrial applications



FEATURES

- Special Teflon® seat, making bubble-tight seals possible to over 90% of set pressures per spec API 527; not applicable to steam
- Adjustable blowdown ring
- Cleaned and packaged for use in O² service in compliance with the CGA specifications G-4.1

Additional cleaning specifications:

- 4WPI-SW70003
- ES.660.503
- GS-38
- GS-40
- Electro-polishing of base and proper assembly for high purity and electronic applications

Testing:

Each valve is set, tested, re-tested and sealed at the factory to the customer's specifications.



TECHNICAL DATA

Materials of Construction:

Shell	Investment Cast 316SS, A.S.M.E SA-351
Base	Investment Cast 316SS, A.S.M.E SA-351
Trim	316SS, A.S.M.E SA-479
Spring	Stainless Steel 17-7 PH A.S.T.M A-313, Type 631



OPERATING RANGES

Temperature	-423° F to +400° F
Set Pressures	0 to 400 PSIG



OPTIONS

- Large and Extra Large Capacity Consult factory for flow rates
- BSP threads are available on most sizes
- Lever operation



APPLICABLE CODES

Designed and manufactured to meet:

- CGA S-1.2 and S-1.3
- API 527
- V-4301 (Cryogenic Non-Oxygen)
- AD-Merkblatt A2
- V-4401 (Oxygen)
- CRN 0G0591.9
- ASME sec.VIII

TYPE RXSO-S



DIMENSIONS & CHARACTERISTICS

Air Capacity Table

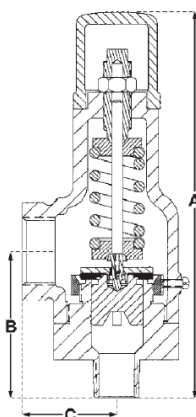
Discharge capacities in cubic feet per minute of air at 10% or 3 PSI, whichever is greater, overpressure.

Inlet Sizes Inches	1/2 3/4	1/2 3/4 1
Outlet Sizes Inches	3/4 1	1-1/4
Seat Diameter Inches	A 0.750	B 1.000
Flow Area	0.118	0.204
Set Pressure		
10	36	63
15	43	74
20	48	85
25	55	96
30	62	108
35	70	120
40	77	133
45	84	145
50	91	157
55	98	170
60	105	182
65	113	195
70	120	207
75	127	220
80	134	232
85	141	244
90	149	257
95	156	269
100	163	282
105	170	294
110	177	307
115	184	319
120	192	331
125	199	344
130	206	356
135	213	369

Inlet Sizes Inches	1/2 3/4	1/2 3/4 1
Outlet Sizes Inches	3/4 1	1-1/4
Seat Diameter Inches	A 0.750	B 1.000
Flow Area	0.118	0.204
Set Pressure		
140	220	381
145	228	393
150	235	406
155	242	418
160	249	431
165	256	443
170	264	456
175	271	468
180	278	480
185	285	493
190	292	505
195	299	518
200	307	530
205	314	543
210	321	555
215	328	567
220	335	580
225	343	592
230	350	605
235	357	617
240	364	629
245	371	642
250	378	654
255	386	667
260	393	679
265	400	692

Inlet Sizes Inches	1/2 3/4	1/2 3/4 1
Outlet Sizes Inches	3/4 1	1-1/4
Seat Diameter Inches	A 0.750	B 1.000
Flow Area	0.118	0.204
Set Pressure		
270	407	704
275	414	716
280	422	729
285	429	741
290	436	754
295	443	766
300	450	779
305	458	791
310	465	803
315	472	816
320	479	828
325	486	841
330	493	853
335	501	866
340	508	878
345	515	890
350	522	903
355	529	915
360	537	928
365	544	940
370	551	952
375	558	965
380	565	977
385	572	989
390	580	1002
395	587	1015
400	594	1027

NOTE: Pressure Settings below 15 PSIG (1.034 barg) are non code



DIMENSIONS & WEIGHTS

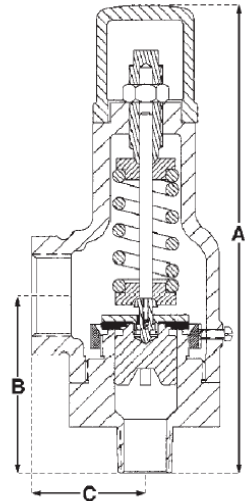
RXSO-S	Inlet (in)	Orifice	Outlet (in)	Max P (psi)	A Overall Height	B Overall Height	C Overall Width	Weight (lb)
76**ACD	0.5	A	0.75	400	5.78	2.44	1.34	2
76**ACE	0.5	A	1	400	6.41	2.69	1.69	3
76**ADD	0.75	A	0.75	400	5.905	2.565	1.34	2
76**ADE	0.75	A	1	400	6.535	2.815	1.69	3
76**BCF	0.5	B	1.25	400	7.492	2.992	1.88	3
76**BDF	0.75	B	1.25	400	7.492	2.992	1.88	4
76**BEF	1	B	1.25	400	7.492	2.992	1.88	5

NOTE: Codes used for 760 and 765 series

BRONZE & STAINLESS STEEL SAFETY RELIEF VALVES

TYPE RSL

0 to 300 PSIG



APPLICATIONS

- Tanks, pumps, pipe lines and other vessels containing non-corrosive liquid, and where large relieving capacities are not required

FEATURES

- Teflon® seat for improved seat tightness
- Cleaned and packaged for use in O² service in compliance with the CGA specification G-4.1

Additional cleaning specifications:

- 4WPI-SW70003
- GS-38

OPTIONS

- BPS threads available on most sizes
- Lever operation

Testing:

Each valve is set, tested, re-tested and sealed at the factory to the customer's specifications.

TECHNICAL DATA

Materials of Construction:

BRONZE

Shell	Cast Bronze, A.S.M.E SB-62
Base	Forged Brass, Alloy C37700
Trim	Copper Alloy
Spring	Stainless Steel 17-7 PH A.S.T.M, A-313, Type 631

STAINLESS STEEL

Shell	Investment Cast 316SS, A.S.M.E SA-351
Base	Investment Cast 316SS, A.S.M.E SA-351
Trim	316SS, A.S.M.E SA-479
Spring	Stainless Steel 17-7 PH, A.S.T.M, A-313, Type 631

Sizes:

Bronze Inlet - 1/2" to 2"	Outlet - 3/4" to 2-1/2"
Stainless Steel Inlet - 1/2" to 1"	Outlet - 3/4" to 1-1/4"

OPERATING RANGES

Temperature	0° F to +300° F
Set Pressures	0 to 300 PSIG

For use with back pressure services, please consult factory.

DIMENSIONS & CHARACTERISTICS

WATER CAPACITY TABLE

Rate of discharge in gallons of water per minute at set pressure plus 25% accumulation or overpressure.

Set Pressure	Setting Range		Leak Tight	1% Over Pressure (Target Pop)	WATER CAPACITY				
	Min	Max			A 0.118 sq-in	B 0.204 sq-in	C 0.326 sq-in	D 0.424 sq-in	E 0.628 sq-in
PSIG					GPM				
9	7.0	11.0	4.0	9.1	11.7	19.5	31.2	40.6	60.2
10	8.0	12.0	5.0	10.1	12.0	20.0	32.0	41.6	61.6
11	9.0	13.0	6.0	11.1	12.3	20.5	32.7	42.5	63.0
12	10.0	14.0	7.0	12.1	12.5	20.9	33.4	43.5	64.4
13	11.0	15.0	8.0	13.1	12.8	21.3	34.1	44.4	65.7
14	12.0	16.0	9.0	14.1	13.1	21.8	34.8	45.3	67.0
15	13.0	17.0	10.0	15.2	13.3	22.2	35.5	46.1	68.3
16	14.0	18.0	11.0	16.2	13.5	22.6	36.1	47.0	69.6
17	15.0	19.0	12.0	17.2	13.8	23.0	36.8	47.8	70.8
18	16.0	20.0	13.0	18.2	14.0	23.4	37.4	48.6	72.0
19	17.0	21.0	14.0	19.2	14.3	23.8	38.0	49.5	73.2
20	18.0	22.0	15.0	20.2	14.5	24.2	38.6	50.3	74.4
21	19.0	23.0	16.0	21.2	14.7	24.6	39.2	51.0	75.6
22	20.0	24.0	17.0	22.2	14.9	24.9	39.8	51.8	76.7
23	21.0	25.0	18.0	23.2	15.2	25.3	40.4	52.6	77.9
24	22.0	26.0	19.0	24.2	15.4	25.7	41.0	53.3	79.0
25	23.0	27.0	20.0	25.3	15.6	26.0	41.6	54.1	80.1
26	24.0	28.0	21.0	26.3	15.8	26.4	42.1	54.8	81.2
27	25.0	29.0	22.0	27.3	16.0	26.7	42.7	55.5	82.2
28	26.0	30.0	23.0	28.3	16.2	27.1	43.2	56.2	83.3
29	27.0	31.0	24.0	29.3	16.4	27.4	43.8	56.9	84.3
30	28.0	32.0	25.0	30.3	16.6	27.7	44.3	57.6	85.3
31	29.0	33.0	26.0	31.3	16.8	28.1	44.8	58.3	86.4
32	30.0	34.0	27.0	32.3	17.0	28.4	45.5	59.0	87.4
33	31.0	35.0	28.0	33.3	17.2	28.7	45.9	59.7	88.4
34	32.0	36.0	29.0	34.3	17.4	29.0	46.4	60.3	89.3
35	33.0	37.0	30.0	35.4	17.6	29.3	46.9	61.0	90.3
36	34.0	38.0	31.0	36.4	17.8	29.6	47.4	61.6	91.3
37	35.0	39.0	32.0	37.4	18.0	30.0	47.9	62.3	92.2
38	36.0	40.0	33.0	38.4	18.1	30.3	48.4	62.9	93.2
39	37.0	41.0	34.0	39.4	18.3	30.6	48.8	63.5	94.1
40	38.0	42.0	35.0	40.4	18.5	30.9	49.3	64.1	95.0
41	39.0	43.0	36.0	41.4	18.7	31.2	49.8	64.8	95.9
42	40.0	44.0	37.0	42.4	18.9	31.5	50.3	65.4	96.8
43	41.0	45.0	38.0	43.4	19.0	31.7	50.7	66.0	97.7
44	42.0	46.0	39.0	44.4	19.2	32.0	51.2	66.6	98.6
45	43.0	47.0	40.0	45.5	19.4	32.3	51.6	67.2	99.5
46	44.0	48.0	41.0	46.5	19.5	32.6	52.1	67.8	100.4
47	45.0	49.0	42.0	47.5	19.7	32.9	52.6	68.3	101.2
48	46.0	50.0	43.0	48.5	19.9	33.2	53.0	68.9	102.1
49	47.0	51.0	44.0	49.5	20.0	33.4	53.4	69.5	102.9
50	48.0	52.0	45.0	50.5	20.2	33.7	53.9	70.1	103.8
51	49.0	53.0	45.9	51.5	20.4	34.0	54.3	70.6	104.6
52	50.0	54.0	46.8	52.5	20.5	34.3	54.7	71.2	105.5
53	51.0	55.0	47.7	53.5	20.7	34.5	55.2	71.8	106.3
54	52.0	56.0	48.6	54.5	20.9	34.8	55.6	72.3	107.1
55	53.0	57.0	49.5	55.6	21.0	35.1	56.0	72.9	107.9
56	54.0	58.0	50.4	56.6	21.2	35.3	56.4	73.4	108.7
57	55.0	59.0	51.3	57.9	21.3	35.6	56.8	73.9	109.5
58	56.0	60.0	52.2	58.6	21.5	35.8	57.4	74.5	110.3
59	57.0	61.0	53.1	59.6	21.6	36.1	57.7	75.0	111.1

DIMENSIONS & CHARACTERISTICS, CONT 1

WATER CAPACITY TABLE

Rate of discharge in gallons of water per minute at set pressure plus 25% accumulation or overpressure.

Set Pressure	Setting Range		Leak Tight	1% Over Pressure (Target Pop)	WATER CAPACITY				
	Min	Max			A 0.118 sq-in	B 0.204 sq-in	C 0.326 sq-in	D 0.424 sq-in	E 0.628 sq-in
PSIG					GPM				
60	58.0	62.0	54.0	60.6	21.8	36.3	58.1	75.5	111.9
61	59.0	63.0	54.9	61.6	21.9	36.6	58.5	76.1	112.7
62	60.0	64.0	55.8	62.6	22.1	36.8	58.9	76.6	113.4
63	61.0	65.0	56.7	63.6	22.2	37.1	59.3	77.1	114.2
64	62.0	66.0	57.6	64.6	22.4	37.3	59.7	77.6	115.0
65	63.0	67.0	58.5	65.7	22.5	37.6	60.1	78.1	115.7
66	64.0	68.0	59.4	66.7	22.7	37.8	60.5	78.6	116.5
67	65.0	69.0	60.3	67.7	22.8	38.1	60.8	79.1	117.2
68	66.0	70.0	61.2	68.7	23.0	38.3	61.2	79.6	117.9
69	67.0	71.0	62.1	69.7	23.1	38.6	61.6	80.1	118.7
70	68.0	72.0	63.0	70.7	23.3	38.8	62.0	80.6	119.4
71	68.9	73.1	63.9	71.7	23.4	39.0	62.4	81.1	120.1
72	69.9	74.1	64.8	72.7	23.5	39.3	62.7	81.6	120.9
73	70.9	75.1	65.7	73.7	23.7	39.5	63.1	82.1	121.6
74	71.8	76.2	66.6	74.7	23.8	39.7	63.5	82.6	122.3
75	72.8	77.2	67.5	75.8	24.0	40.0	63.9	83.1	123.0
76	73.8	78.2	68.4	76.8	24.1	40.2	64.2	83.5	123.7
77	74.7	79.3	69.3	77.8	24.2	40.4	64.6	84.0	124.4
78	75.7	80.3	70.2	78.8	24.4	40.6	65.0	84.5	125.1
79	76.7	81.3	71.1	79.8	24.5	40.9	65.3	84.9	125.8
80	77.6	82.4	72.0	80.8	24.6	41.1	65.7	85.4	126.5
81	78.6	83.4	72.9	81.8	24.8	41.3	66.0	85.9	127.2
82	79.6	84.4	73.8	82.8	24.9	41.5	66.4	86.3	127.9
83	80.6	85.4	74.7	83.8	25.0	41.8	66.7	86.8	128.6
84	81.5	86.5	75.6	84.8	25.2	42.0	67.1	87.3	129.2
85	82.5	87.5	76.5	85.9	25.3	42.2	67.4	87.7	129.9
86	83.5	88.5	77.4	86.9	25.4	42.4	67.8	88.2	130.6
87	84.4	89.6	78.3	87.9	25.6	42.6	68.1	88.6	131.2
88	85.4	90.6	79.2	88.9	25.7	42.8	68.5	89.1	131.9
89	86.4	91.6	80.1	89.9	25.8	43.1	68.8	89.5	132.6
90	87.3	92.7	81.0	90.9	25.9	43.3	69.2	89.9	133.2
91	88.3	93.7	81.9	91.9	26.1	43.5	69.5	90.4	133.9
92	89.3	94.7	82.8	92.9	26.2	43.7	69.8	90.8	134.5
93	90.3	95.7	83.7	93.9	26.3	43.9	70.2	91.3	135.2
94	91.2	96.8	84.6	94.9	26.4	44.1	70.5	91.7	135.8
95	92.2	97.8	85.5	96.0	26.6	44.3	70.8	92.1	136.5
96	93.2	98.8	86.4	97.0	26.7	44.5	71.2	92.6	137.1
97	94.1	99.9	87.3	98.0	26.8	44.7	71.5	93.0	137.7
98	95.1	100.9	88.2	99.0	26.9	44.9	71.8	93.4	138.4
99	96.1	101.9	89.1	100.0	27.1	45.1	72.2	93.8	139.0
100	97.0	103.0	90.0	101.0	27.2	45.4	72.5	94.3	139.6
101	98.0	104.0	90.9	102.0	27.3	45.6	72.8	94.7	140.2
102	99.0	105.0	91.8	103.0	27.4	45.8	73.1	95.1	140.9
103	100.0	106.0	92.7	104.0	27.5	46.0	73.4	95.5	141.5
104	100.9	107.1	93.6	105.0	27.7	46.2	73.8	95.9	142.1
105	101.9	108.1	94.5	106.1	27.8	46.4	74.1	96.3	142.7
106	102.9	109.1	95.4	107.1	27.9	46.6	74.4	96.8	143.3
107	103.8	110.2	96.3	108.1	28.0	46.8	74.7	97.2	143.9
108	104.8	111.2	97.2	109.1	28.1	46.9	75.0	97.6	144.5
109	105.8	112.2	98.1	110.1	28.3	47.1	75.3	98.0	145.1
110	106.7	113.3	99.0	111.1	28.4	47.3	75.6	98.4	145.7

DIMENSIONS & CHARACTERISTICS, CONT 2

WATER CAPACITY TABLE

Rate of discharge in gallons of water per minute at set pressure plus 25% accumulation or overpressure.

Set Pressure	Setting Range		Leak Tight	1% Over Pressure (Target Pop)	WATER CAPACITY				
	Min	Max			A 0.118 sq-in	B 0.204 sq-in	C 0.326 sq-in	D 0.424 sq-in	E 0.628 sq-in
PSIG					GPM				
111	107.7	114.3	99.9	112.1	28.5	47.5	76.0	98.8	146.3
112	108.7	115.3	100.8	113.1	28.6	47.7	76.3	99.2	146.9
113	109.7	116.3	101.7	114.1	28.7	47.9	76.6	99.6	147.5
114	110.6	117.4	102.6	115.1	28.8	48.1	76.9	100.0	148.1
115	111.6	118.4	103.5	116.2	29.0	48.3	77.2	100.4	148.7
116	112.6	119.4	104.4	117.2	29.1	48.5	77.5	100.8	149.3
117	113.5	120.5	105.3	118.2	29.2	48.7	77.8	101.2	149.9
118	114.5	121.5	106.2	119.2	29.3	48.9	78.1	101.6	150.4
119	115.5	122.5	107.1	120.2	29.4	49.1	78.4	102.0	151.0
120	116.4	123.6	108.0	121.2	29.5	49.2	78.7	102.4	151.6
121	117.4	124.6	108.9	122.2	29.6	49.4	79.0	102.7	152.2
122	118.4	125.6	109.8	123.2	29.7	49.6	79.3	103.1	152.7
123	119.4	126.6	110.7	124.2	29.9	49.8	79.6	103.5	153.3
124	120.3	127.7	111.6	125.2	30.0	50.0	79.9	103.9	153.9
125	121.3	128.7	112.5	126.3	30.1	50.2	80.2	104.3	154.4
126	122.3	129.7	113.4	127.3	30.2	50.4	80.5	104.7	155.0
127	123.2	130.8	114.3	128.3	30.3	50.5	80.8	105.0	155.6
128	124.2	131.8	115.2	129.3	30.4	50.7	81.0	105.4	156.1
129	125.2	132.8	116.1	130.3	30.5	50.9	81.3	105.8	156.7
130	126.1	133.9	117.0	131.3	30.6	51.1	81.6	106.2	157.2
131	127.1	134.9	117.9	132.3	30.7	51.3	81.9	106.5	157.8
132	128.1	135.9	118.8	133.3	30.8	51.4	82.2	106.9	158.3
133	129.1	136.9	119.7	134.3	30.9	51.6	82.5	107.3	158.9
134	130.0	138.0	120.6	135.3	31.0	51.8	82.8	107.7	159.4
135	131.0	139.0	121.5	136.4	31.2	52.0	83.1	108.0	160.0
136	132.0	140.0	122.4	137.4	31.3	52.1	83.3	108.4	160.5
137	132.9	141.1	123.3	138.4	31.4	52.3	83.6	108.8	161.1
138	133.9	142.1	124.2	139.4	31.5	52.5	83.9	109.1	161.6
139	134.9	143.1	125.1	140.4	31.6	52.7	84.2	109.5	162.2
140	135.8	144.2	126.0	141.4	31.7	52.8	84.5	109.8	162.7
141	136.8	145.2	126.9	142.4	31.8	53.0	84.7	110.2	163.2
142	137.8	146.2	127.8	143.4	31.9	53.2	85.0	110.6	163.8
143	138.8	147.2	128.7	144.4	32.0	53.4	85.3	110.9	164.3
144	139.7	148.3	129.6	145.4	32.1	53.5	85.6	111.3	164.8
145	140.7	149.3	130.5	146.5	32.2	53.7	85.8	111.6	165.4
146	141.7	150.3	131.4	147.5	32.3	53.9	86.1	112.0	165.9
147	142.6	151.4	132.3	148.5	32.4	54.1	86.4	112.3	166.4
148	143.6	152.4	133.2	149.5	32.5	54.2	86.7	112.7	166.9
149	144.6	153.4	134.1	150.5	32.6	54.4	86.9	113.1	167.4
150	145.5	154.5	135.0	151.5	32.7	54.6	87.2	113.4	168.0
151	146.5	155.5	135.9	152.5	32.8	54.7	87.5	113.8	168.5
152	147.5	156.5	136.8	153.5	32.9	54.9	87.7	114.1	169.0
153	148.5	157.5	137.7	154.5	33.0	55.1	88.0	114.5	169.5
154	149.4	158.6	138.6	155.5	33.1	55.2	88.3	114.8	170.0
155	150.4	159.6	139.5	156.6	33.2	55.4	88.5	115.1	170.5
156	151.4	160.6	140.4	157.6	33.3	55.6	88.8	115.5	171.1
157	152.3	161.7	141.3	158.6	33.4	55.7	89.1	115.8	171.6
158	153.3	162.7	142.2	159.6	33.5	55.9	89.3	116.2	172.1
159	154.3	163.7	143.1	160.6	33.6	56.1	89.6	116.5	172.6
160	155.2	164.8	144.0	161.6	33.7	56.2	89.8	116.9	173.1
161	156.2	165.8	144.9	162.6	33.8	56.4	90.1	117.2	173.6

DIMENSIONS & CHARACTERISTICS, CONT 3

WATER CAPACITY TABLE

Rate of discharge in gallons of water per minute at set pressure plus 25% accumulation or overpressure.

Set Pressure	Setting Range		Leak Tight	1% Over Pressure (Target Pop)	WATER CAPACITY				
	Min	Max			A 0.118 sq-in	B 0.204 sq-in	C 0.326 sq-in	D 0.424 sq-in	E 0.628 sq-in
PSIG					GPM				
162	157.2	166.8	145.8	163.6	33.9	56.6	90.4	117.5	174.1
163	158.2	167.8	146.7	164.6	34.0	56.7	90.6	117.9	174.6
164	159.1	168.9	147.6	165.6	34.1	56.9	90.9	118.2	175.1
165	160.1	169.9	148.5	166.7	34.2	57.0	91.1	118.5	175.6
166	161.1	170.9	149.4	167.7	34.3	57.2	91.4	118.9	176.1
167	162.0	172.0	150.3	168.7	34.4	57.4	91.7	119.2	176.6
168	163.0	173.0	151.2	169.7	34.5	57.5	91.9	119.5	177.1
169	164.0	174.0	152.1	170.7	34.6	57.7	92.2	119.9	177.6
170	164.9	175.1	153.0	171.7	34.7	57.8	92.4	120.2	178.0
171	165.9	176.1	153.9	172.7	34.8	58.0	92.7	120.5	178.5
172	166.9	177.1	154.8	173.7	34.9	58.2	92.9	120.9	179.0
173	167.9	178.1	155.7	174.7	35.0	58.3	93.2	121.2	179.5
174	168.8	179.2	156.6	175.7	35.1	58.5	93.4	121.5	180.0
175	169.8	180.2	157.5	176.8	35.1	58.6	93.7	121.9	180.5
176	170.8	181.2	158.4	177.8	35.2	58.8	93.9	122.2	181.0
177	171.7	182.3	159.3	178.8	35.3	58.9	94.2	122.5	181.4
178	172.7	183.3	160.2	179.8	35.4	59.1	94.4	122.8	181.9
179	173.7	184.3	161.1	180.8	35.5	59.3	94.7	123.2	182.4
180	174.6	185.4	162.0	181.8	35.6	59.4	94.9	123.5	182.9
181	175.6	186.4	162.9	182.8	35.7	59.6	95.2	123.8	183.4
182	176.6	187.4	163.8	183.8	35.8	59.7	95.4	124.1	183.8
183	177.6	188.4	164.7	184.8	35.9	59.9	95.7	124.4	184.3
184	178.5	189.5	165.6	185.8	36.0	60.0	95.9	124.8	184.8
185	179.5	190.5	166.5	186.9	36.1	60.2	96.2	125.1	185.3
186	180.5	191.5	167.4	187.9	36.2	60.3	96.4	125.4	185.7
187	181.4	192.6	168.3	188.9	36.3	60.5	96.7	125.7	186.2
188	182.4	193.6	169.2	189.9	36.3	60.6	96.9	126.0	186.7
189	183.4	194.6	170.1	190.9	36.4	60.8	97.1	126.3	187.2
190	184.3	195.7	171.0	191.9	36.5	60.9	97.4	126.7	187.6
191	185.3	196.7	171.9	192.9	36.6	61.1	97.6	127.0	188.1
192	186.3	197.7	172.8	193.9	36.7	61.2	97.9	127.3	188.5
193	187.3	198.7	173.7	194.9	36.8	61.4	98.1	127.6	189.0
194	188.2	199.8	174.6	195.9	36.9	61.5	98.3	127.9	189.4
195	189.2	200.8	175.5	197.0	37.0	61.7	98.6	128.2	189.9
196	190.2	201.8	176.4	198.0	37.1	61.8	98.8	128.5	190.4
197	191.1	202.9	177.3	199.0	37.2	62.0	99.1	128.8	190.8
198	192.1	203.9	178.2	200.0	37.2	62.1	99.3	129.1	191.3
199	193.1	204.9	179.1	201.0	37.3	62.3	99.5	129.4	191.7
200	194.0	206.0	180.0	202.0	37.4	62.4	99.8	129.8	192.2
201	195.0	207.0	180.9	203.0	37.5	62.6	100.0	130.1	192.6
202	196.0	208.0	181.8	204.0	37.6	62.7	100.2	130.4	193.1
203	197.0	209.0	182.7	205.0	37.7	62.9	100.5	130.7	193.5
204	197.9	210.1	183.6	206.0	37.8	63.0	100.7	131.0	194.0
205	198.9	211.1	184.5	207.1	37.9	63.2	100.9	131.3	194.4
206	199.9	212.1	185.4	208.1	38.0	63.3	101.2	131.6	194.9
207	200.8	213.2	186.3	209.1	38.0	63.5	101.4	131.9	195.3
208	201.8	214.2	187.2	210.1	38.1	63.6	101.6	132.2	195.8
209	202.8	215.2	188.1	211.1	38.2	63.7	101.9	132.5	196.2
210	203.7	216.3	189.0	212.1	38.3	63.9	102.1	132.8	196.7
211	204.7	217.3	189.9	213.1	38.4	64.0	102.3	133.1	197.1
212	205.7	218.3	190.8	214.1	38.5	64.2	102.6	133.4	197.6

DIMENSIONS & CHARACTERISTICS, CONT 4

WATER CAPACITY TABLE

Rate of discharge in gallons of water per minute at set pressure plus 25% accumulation or overpressure.

Set Pressure	Setting Range		Leak Tight	1% Over Pressure (Target Pop)	WATER CAPACITY				
	Min	Max			A 0.118 sq-in	B 0.204 sq-in	C 0.326 sq-in	D 0.424 sq-in	E 0.628 sq-in
					PSIG		GPM		
213	206.7	219.3	191.7	215.1	38.6	64.3	102.8	133.7	198.0
214	207.6	220.4	192.6	216.1	38.6	64.5	103.0	134.0	198.4
215	208.6	221.4	193.5	217.2	38.7	64.6	103.2	134.3	198.9
216	209.6	222.4	194.4	218.2	38.8	64.7	103.5	134.6	199.3
217	210.5	223.5	195.3	219.2	38.9	64.9	103.7	134.9	199.7
218	211.5	224.5	196.2	220.2	39.0	65.0	103.9	135.2	200.2
219	212.5	225.5	197.1	221.2	39.1	65.2	104.1	135.4	200.6
220	213.4	226.6	198.0	222.2	39.2	65.3	104.4	135.7	201.1
221	214.4	227.6	198.9	223.2	39.2	65.5	104.6	136.0	201.5
222	215.4	228.6	199.8	224.2	39.3	65.6	104.8	136.3	201.9
223	216.4	229.6	200.7	225.2	39.4	65.7	105.0	136.6	202.3
224	217.3	230.7	201.6	226.2	39.5	65.9	105.3	136.9	202.8
225	218.3	231.7	202.5	227.3	39.6	66.0	105.5	137.2	203.2
226	219.3	232.7	203.4	228.3	39.7	66.2	105.7	137.5	203.6
227	220.2	233.8	204.3	229.3	39.7	66.3	105.9	137.8	204.1
228	221.2	234.8	205.2	230.3	39.8	66.4	106.2	138.1	204.5
229	222.2	235.8	206.1	231.3	39.9	66.6	106.4	138.4	204.9
230	223.1	236.9	207.0	232.3	40.0	66.7	106.6	138.6	205.3
231	224.1	237.9	207.9	233.3	40.1	66.8	106.8	138.9	205.8
232	225.1	238.9	208.8	234.3	40.2	67.0	107.0	139.2	206.2
233	226.1	239.9	209.7	235.3	40.2	67.1	107.3	139.5	206.6
234	227.0	241.0	210.6	236.3	40.3	67.3	107.5	139.8	207.0
235	228.0	242.0	211.5	237.4	40.4	67.4	107.7	140.1	207.5
236	229.0	243.0	212.4	238.4	40.5	67.5	107.9	140.3	207.9
237	229.9	244.1	213.3	239.4	40.6	67.7	108.1	140.6	208.3
238	230.9	245.1	214.2	240.4	40.6	67.8	108.3	140.9	208.7
239	231.9	246.1	215.1	241.4	40.7	67.9	108.6	141.2	209.1
240	232.8	247.2	216.0	242.4	40.8	68.1	108.8	141.5	209.5
241	233.8	248.2	216.9	243.4	40.9	68.2	109.0	141.8	210.0
242	234.8	249.2	217.8	244.4	41.0	68.3	109.2	142.0	210.4
243	235.8	250.2	218.7	245.4	41.0	68.5	109.4	142.3	210.8
244	236.7	251.3	219.6	246.4	41.1	68.6	109.6	142.6	211.2
245	237.7	252.3	220.5	247.5	41.2	68.7	109.9	142.9	211.6
246	238.7	253.3	221.4	248.5	41.3	68.9	110.1	143.2	212.0
247	239.6	254.4	222.3	249.5	41.4	69.0	110.3	143.4	212.4
248	240.6	255.4	223.2	250.5	41.4	69.1	110.5	143.7	212.9
249	241.6	256.4	224.1	251.5	41.5	69.3	110.7	144.0	213.3
250	242.5	257.5	225.0	252.5	41.6	69.4	110.9	144.3	213.7
251	243.5	258.5	225.9	253.5	41.7	69.5	111.1	144.5	214.1
252	244.5	259.5	226.8	254.5	41.8	69.7	111.3	144.8	214.5
253	245.5	260.5	227.7	255.5	41.8	69.8	111.6	145.1	214.9
254	246.4	261.6	228.6	256.5	41.9	69.9	111.8	145.4	215.3
255	247.4	262.6	229.5	257.6	42.0	70.1	112.0	145.6	215.7
256	248.4	263.6	230.4	258.6	42.1	70.2	112.2	145.9	216.1
257	249.3	264.7	231.3	259.6	42.2	70.3	112.4	146.2	216.5
258	250.3	265.7	232.2	260.6	42.2	70.5	112.6	146.4	216.9
259	251.3	266.7	233.1	261.6	42.3	70.6	112.8	146.7	217.3
260	252.2	267.8	234.0	262.6	42.4	70.7	113.0	147.0	217.7
261	253.2	268.8	234.9	263.6	42.5	70.9	113.2	147.3	218.1
262	254.2	269.8	235.8	264.6	42.6	71.0	113.4	147.5	218.5
263	255.2	270.8	236.7	265.6	42.6	71.1	113.6	147.8	218.9

DIMENSIONS & CHARACTERISTICS, CONT 5

WATER CAPACITY TABLE

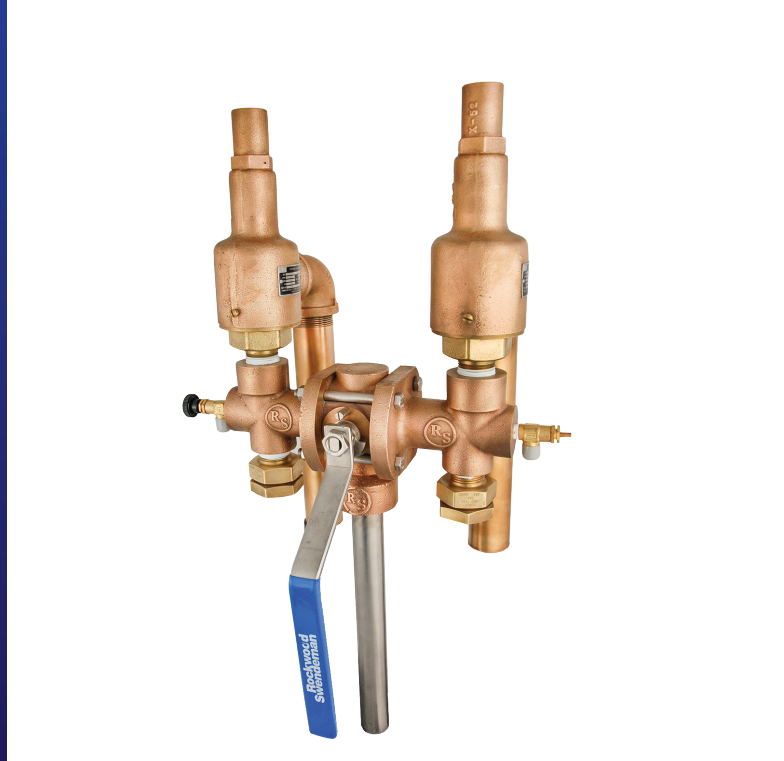
Rate of discharge in gallons of water per minute at set pressure plus 25% accumulation or overpressure.

Set Pressure	Setting Range		Leak Tight	1% Over Pressure (Target Pop)	WATER CAPACITY				
	Min	Max			A 0.118 sq-in	B 0.204 sq-in	C 0.326 sq-in	D 0.424 sq-in	E 0.628 sq-in
PSIG				GPM					
264	256.1	271.9	237.6	266.6	42.7	71.2	113.8	148.1	219.3
265	257.1	272.9	238.5	267.7	42.8	71.4	114.1	148.3	219.7
266	258.1	273.9	239.4	239.4	42.9	71.5	114.3	148.6	220.1
267	259.0	275.0	240.3	269.7	42.9	71.6	114.5	148.9	220.5
268	260.0	276.0	241.2	270.7	43.0	71.8	114.7	149.1	220.9
269	261.0	277.0	242.1	271.7	43.1	71.9	114.9	149.4	221.3
270	261.9	278.1	243.0	272.7	43.2	72.0	115.1	149.7	221.7
271	262.9	279.1	243.9	273.9	43.2	72.1	115.3	149.9	222.1
272	263.9	280.1	244.8	274.7	43.3	72.3	115.5	150.2	222.5
273	264.9	281.1	245.7	275.7	43.4	72.4	115.7	150.5	222.9
274	265.8	282.2	246.6	276.7	43.5	72.5	115.9	150.7	223.2
275	266.8	283.2	247.5	277.8	43.5	72.6	116.1	151.0	223.6
276	267.8	284.2	248.4	278.8	43.6	72.8	116.3	151.3	224.0
277	268.7	285.3	249.3	279.8	43.7	72.9	116.5	151.5	224.4
278	269.7	286.3	250.2	280.8	43.8	73.0	116.7	151.8	224.8
279	270.7	287.3	251.1	281.8	43.9	73.2	116.9	152.0	225.2
280	271.6	288.4	252.0	282.8	43.9	73.3	117.1	152.3	225.6
281	272.6	289.4	252.9	283.8	44.0	73.4	117.3	152.6	226.0
282	273.6	290.4	253.8	284.8	44.1	73.5	117.5	152.8	226.4
283	274.6	291.4	254.7	285.8	44.2	73.7	117.7	153.1	226.7
284	275.5	292.5	255.6	286.8	44.2	73.8	117.9	153.3	227.1
285	276.5	293.5	256.5	287.9	44.3	73.9	118.1	153.6	227.5
286	277.5	294.5	257.4	288.9	44.4	74.0	118.3	153.9	227.9
287	278.4	295.6	258.3	289.9	44.5	74.2	118.5	154.1	228.3
288	279.4	296.6	259.2	290.9	44.5	74.3	118.7	154.4	228.7
289	280.4	297.6	260.1	291.9	44.6	74.4	118.9	154.6	229.0
290	281.3	298.7	261.0	292.9	44.7	74.5	119.1	154.9	229.4
295	286.2	303.8	265.5	298.0	45.0	75.1	120.1	156.2	231.3
300	291.0	309.0	270.0	303.0	45.4	75.7	121.0	157.4	233.2

SAFETY RELIEF VALVE SUB-ASSEMBLY

CRYOTREE™

0 to 400 PSIG



Valve Size:

Available in 3/4" F to 1" F



APPLICATIONS

On stationary cryogenic storage tanks to isolate safety relief valves and rupture discs in the event they need to be serviced. Rockwood-Swendemans' CryoTree™ assemblies are manufactured for use on stationary cryogenic storage tanks to isolate safety relief valves and rupture discs in the event they need to be serviced. Utilizing this system eliminates the need to shut down and evacuate the tank for service. This modular assembly provides for just a single connection to the internal tank piping.



FEATURES

- Duel safety relief systems engineered for maximum safety and reliability
- Easy system installation
- Includes high capacity safety relief valves, full flow diverting valve, rupture discs, bleed valves, and related piping assembled
- Standardized components
- Eliminates the need to shut down and evacuate the tank for service
- Minimizes pressure drop in system
- Medical level O² cleaning in conformance with CGA G-4.1
- Sealed in 6mil poly bags to eliminate contamination prior to installation
- Handle indicates flow direction



APPLICABLE CODES

Designed and manufactured to meet:

- CGA S-1.2 and S-1.3
- ASME Sec. VIII
- API 527
- AD-Merkblatt A2
- ANSI B31.3, B16.34



OPERATING RANGES

Temperature..... -423° F to +400° F

Max. Operating Pressure 400 PSIG



TECHNICAL DATA

Materials of Construction:

Body	Bronze B61
End Plate	Bronze B61
Ball	Bronze
Stem	316SS

Testing:

Hydro-statically tested as a complete unit to assure leak tightness.



DIMENSIONS & CHARACTERISTICS

HIGH FLOW DIVERTER VALVE VALUES*

Size (inches)	Safety Relief Valve Outlet		Rupture Disc Outlet	
	CV@ mid position (90°)	CV@ full open (180°)	CV@ mid position (90°)	CV@ full open (180°)
3/4F	9.2	8.2	10.7	8.1
1F	25.3	18.3	16.4	14.0

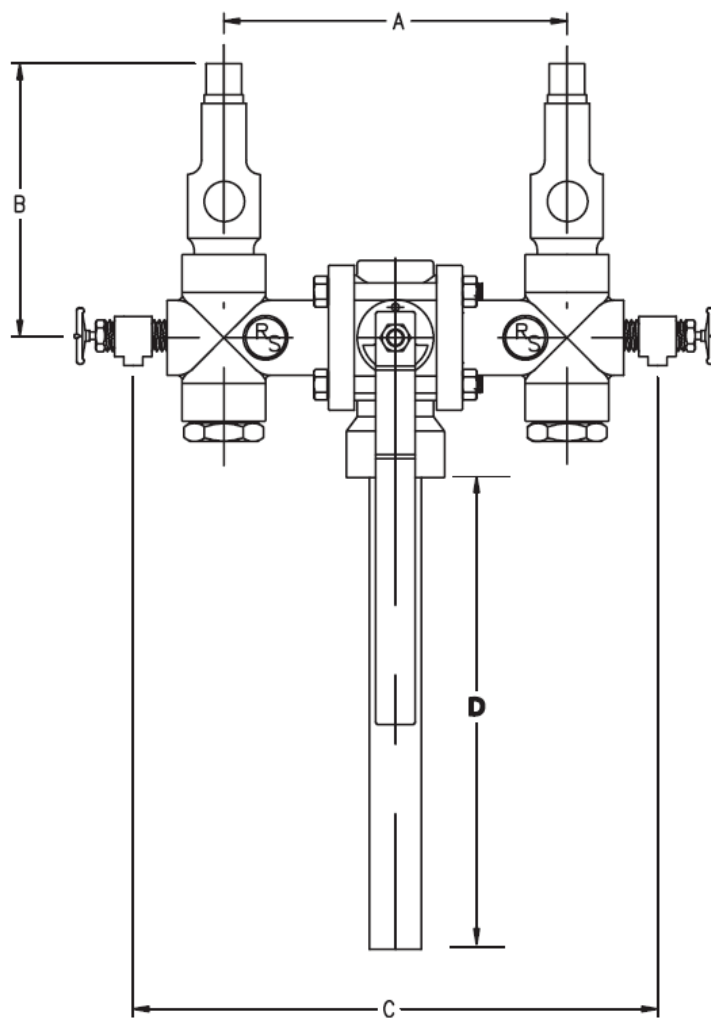
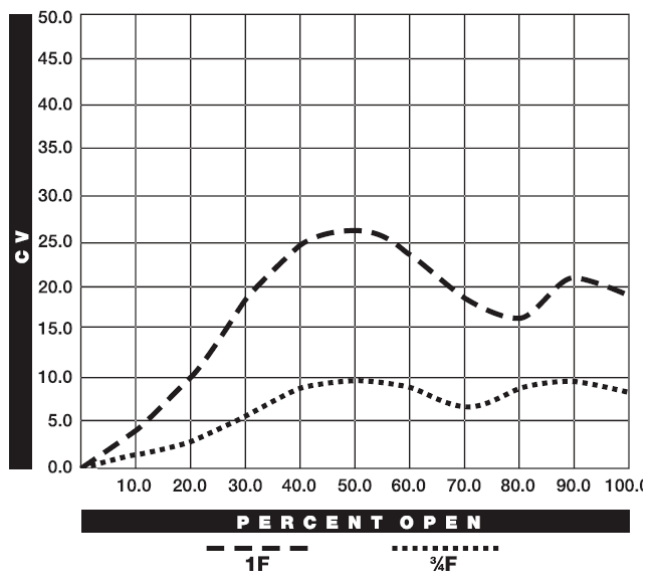
Flows may vary slightly due to outlet connection sizes.

DIMENSION - INCHES

Size	A	B	C
3/4F	5.9	22.5	14.8
1F	8.7	25.7	16.5

Dimensions for reference only.

HIGH FLOW DIVERTER VALVE C_v GRAPH



ORDERING GUIDE

DIVERTER

780 - D F D C A B

MODEL NUMBER
780 Model Number

INLET SIZE
D - 3/4"
E - 1"

ORIFICE
F - Full
T - Tag for Customer

TOP PORT
D - 3/4"
E - 1"
F - 1-1/4"

MATERIAL
B - Bronze

SIDE PORT
A - 1/4"
B - 3/8"
C - 1/2"
D - 3/4"
E - 1"

BOTTOM PORT
A - 1/4"
B - 3/8"
C - 1/2"
D - 3/4"
E - 1"

EX: 3/4" Full with 3/4" Top, 1/2" Bottom and 1/4" Side Ports = 780DFDCAB

Diverter Size	Max NPT		
	Top	Side	Bottom
3/4"	5.9	22.5	14.8
1"	8.7	25.7	16.5

CRYOTREE™

790 D F D C A B - FB 150

MODEL NUMBER
790 Model Number

INLET SIZE
D - 3/4"
E - 1"

OPTIONS
F - Standard
T - Tag for Customer

SRV¹ INLET SIZE
D - 3/4"
E - 1"
F - 1-1/4"

RUPTURE DISC SIZE
A - 1/4"
B - 3/8"
C - 1/2"
D - 3/4"
E - 1"

SRV SETTING
nnn

SRV OUTLET & ORIFICE
DA - 3/4" Outlet, A Orif
EA - 1" Outlet, A Orif
EB - 1" Outlet, B Orif
FB - 1-1/4" Outlet, B Orif
FC - 1-1/4" Outlet, C Orif
GC - 1-1/2" Outlet, C Orif
GD - 1-1/2" Outlet, D Orif
HD - 2" Outlet, D Orif
HE - 2" Outlet, E Orif

RUPTURE DISC SETTING
3 - 130%
4 - 140%
B - 150%
6 - 160%
7 - 170%
8 - 180%
9 - 190%
0 - 200%

PURGE VALVE LOCATION
A2 - Side
B - Bottom

EX: 3/4" Full with 3/4" B 1-1/4" SRV @ 150psi & 1/2" Rupture Disc @ 225psi = 790DFDCAB-FB150

Diverter Size	Max NPT		
	Top	Side	Bottom
3/4"	3/4"	3/4"	1/2"
1"	1-1/4"	1"	1"

- Diverter Top Port
- A is the standard
CryoTree™ only available with 1/4" side or bottom port
- Rupture Disc setting over SRV set pressure
(example: 150psi X 150% = 225psi)
Actual settings to be in 5psi increments (preferred)
- B is the standard

FULL FLOW DIVERTER VALVE

DIVERTER VALVE

0 to 600 PSIG



Valve Size:

Available in 3/4" F to 1" F



APPLICATIONS

- Dual Safety Relief Systems
- Stationary Cryogenic Tanks
- Manifolding
- Distribution Systems
- Process Systems
- Liquid and Gaseous Cryogenic Applications



APPLICABLE CODES

Designed and Manufactured to Meet:

- ANSI B31.3, B16.34



TECHNICAL DATA

Materials of Construction:

All Major Structural Components are 300 Series Stainless Steel

Body	Bronze B61
End Plate	Bronze B61
Ball	Bronze
Stem	316SS
Seats	MTFE
Body Seals	TFE
Stem Seals	CTFE
Steam Bearing	TFE
Bellville Wsh	17-7 SS
External Hardware	300 Series SS



FEATURES

- Engineered for Maximum Safety and Reliability
- Full Flow Manifold Ends
- Medical Level O² Cleaning in Conformance with CGA G-4.1
- 180° Operation
- Handle Indicates Flow Direction
- Low Maintenance
- Blow Out Proof Stem
- V-ring Stem Packing
- All Stainless Externals



OPERATING RANGES

Temperature..... -423° F to +400° F
 Set Pressure to 600 PSIG

DIVERTER VALVE



DIMENSIONS & CHARACTERISTICS

HIGH FLOW DIVERTER VALVE Cv VALUES*

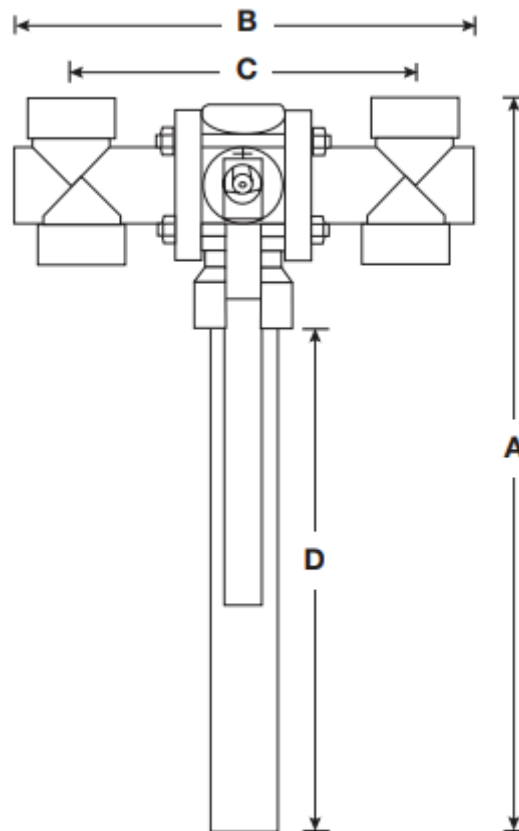
Sizes (inches)	Safety Relief Valve Outlet		Rupture Disc Outlet		Torque
	CV@ mid position (90°)	CV@ full open (180°)	CV@ mid position (90°)	CV@ full open (180°)	Max Value
3/4F	9.2	8.2	10.7	8.1	200 in. lbs.
1F	25.3	18.3	16.4	14.0	300 in. lbs.

* Flows may vary slightly due to outlet connection sizes

DIMENSIONS (inches)

Sizes	A	B	C	D
3/4F	13.00	9.38	7.25	7.25
1F	17.66	11.61	8.73	12.00

* Dimensions for reference only



HIGH FLOW DIVERTER VALVE Cv GRAPH

