



Flow Coefficients

Rupture Disks and Non-Reclosing Pressure Relief Devices in Combination with Pressure Relief Valves



The combinations below have been tested for capacity in accordance with part UG-132, Section 8, Division 1 of the ASME Pressure Vessel Code and the following “Combination Capacity Factors” have been approved by the National Board of Boiler and Pressure Vessel Inspectors. These approvals are listed with The National Board of Boiler and Pressure Vessel Inspectors within their Document, NB-18: Pressure Relief Devices, Section F-1.

Note: The combination capacity factor is to be used as a multiplier to the rated capacity of the relief valve. These factors may be used for all valves per size set at the minimum set pressure or higher. For valves with a lower set pressure than those shown, or for disk/valve combinations not tested, use the default value 0.9 combination capacity factor as required by the ASME code.

Anderson Greenwood Crosby, Mansfield, MA

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15073	GFN	NF-7R	VIII	JB
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
2	90	NICKEL	0.974	19-Sep-80

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15073	JRS	SRB-7RS	VIII	JB
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	76	STAINLESS	0.983	07-Jan-83
1.5	22.5	MONEL®	0.981	04-Jun-86

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15073	RLS	SRB-7RS	VIII	JB
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	125	NICKEL	0.997	10-Jan-89

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15073	S90	S90-7R or SRB-7RS	VIII	JB
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	126	NICKEL	0.955	07-Jan-83
2	75	NICKEL	0.994	07-Jan-83

Anderson Greenwood Crosby, Mansfield, MA (Continued)

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15073	SVI	SVI	VIII	JB
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1.5	125	NICKEL	0.95	07-Jan-83
2	90	NICKEL	0.96	07-Jan-83

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15196	JRS	SRB-7RS	VIII	JO/HSU (Class 2 and 3)
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	76	STAINLESS	0.998	07-Jan-83

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15196	S90	S90-7R or SRB-7RS	VIII	JO/HSU (Class 2 and 3)
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	126	NICKEL	0.959	07-Jan-83
2	75	NICKEL	0.995	07-Jan-83
1.5	100	NICKEL	0.972	05-Aug-87
1.5	103	INCONEL®	0.973	05-Aug-87

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15196	SVI	SVI	VIII	JO/HSU (Class 2 and 3)
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1.5	125	NICKEL	0.956	07-Jan-83
2	90	NICKEL	0.967	07-Jan-83

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15242	S90		VIII, Div. 1	JPV, JPV-M, JPV-MT
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
2	100	Inconel®	1	31-Oct-95

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
36144	JRS	SRB-7RS	VIII	D,DB & ND, NDB
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	50	316 SS	0.989	10-Jun-81
3	35	316 SS	0.978	10-Jun-81
2	18.5	MONEL®	0.975	04-Jun-86

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
36144	S90	S90-7R or SRB-7RS	VIII	D, DB & ND, NDB
Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	125	NICKEL	0.977	10-Jun-81
3	60	NICKEL	0.994	10-Jun-81

Dresser, Inc., Alexandria, LA

Cert Number 18166 Disk Type Number S90 Heads VIII Code Section VIII Valve Type D, DB & ND, NDB

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	146	ALLOY 400	0.948	01-Jun-94

Cert Number 18201 Disk Type Number GFN Heads NF-7R Code Section VIII Valve Type 1900, 1900-30, 1900-35

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
2	89	NICKEL	0.987	08-Dec-80

Cert Number 18201 Disk Type Number JRS Heads SRB-7RS Code Section VIII Valve Type 1900, 1900-30, 1900-35

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	21	MONEL®	0.996	12-Apr-85
1	22.5	316 SS	0.988	12-Apr-85
1	24	HASTELLOY® C	0.99	12-Apr-85

Cert Number 18201 Disk Type Number RB-90 Heads RB-7R Code Section VIII Valve Type 1900, 1900-30, 1900-35

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	75	NICKEL	0.972	08-Dec-78
2	45	NICKEL	0.954	08-Dec-78
3	36	NICKEL	0.958	08-Dec-78
1	74	NICKEL, fluoropolymer	0.976	29-Aug-79

Cert Number 18201 Disk Type Number RLS Heads SRB-7RS Code Section VIII Valve Type 1900, 1900-30, 1900-35

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1.5	81.9	NICKEL	0.965	30-Mar-84
1	146	MONEL®	0.977	12-Apr-85
1	167	HASTELLOY® C	0.974	12-Apr-85
2	82.5	MONEL®	0.971	12-Apr-85
2	83	INCONEL®	0.971	12-Apr-85
2	112	HASTELLOY® C	0.974	12-Apr-85
3	62	MONEL®	0.93	31-May-85
1.5	95	INCONEL®	0.956	28-Jul-87

Dresser, Inc., Alexandria, LA (Continued)

Cert Number 18201 Disk Type Number S90 Heads S90-7R Code Section VIII Valve Type 1900, 1900-30, 1900-35

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	75	Al fluoropolymer	0.91	24-Jun-77
1	125	NICKEL	0.954	24-Jun-77
1.5	81.9	NICKEL	0.965	24-Jun-77
2	45	Al fluoropolymer	0.96	24-Jun-77
2	75	NICKEL	0.969	24-Jun-77
3	36	Al fluoropolymer	0.98	24-Jun-77
3	55	NICKEL	0.995	24-Jun-77
2	85	316 SS	0.969	15-Apr-80
2	85	316 fluoropolymer	0.968	15-Apr-80
2	85	INCONEL®	0.988	15-Apr-80
2	85	INCONEL® fluoropolymer	0.994	15-Apr-80
3	65	INCONEL® fluoropolymer	0.988	15-Apr-80

Cert Number 18201 Disk Type Number S90 Heads S90-7R Code Section VIII fluoropolymer Valve Type 1900, 1900-30, 1900-35

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	73	NICKEL	0.967	29-Aug-79
1	73	NICKEL, fluoropolymer	0.989	29-Aug-79

Cert Number 18201 Disk Type Number SVI Heads Code Section VIII Valve Type 1900, 1900-30, 1900-35

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1.5	76	NICKEL	0.964	29-Aug-79
1.5	76	NICKEL, fluoropolymer	0.983	29-Aug-79
4	40	NICKEL	0.971	29-Aug-79
4	40	NICKEL, fluoropolymer	0.95	19-Sep-79
3	85	INCONEL®	0.986	15-Apr-80

Farris Engineering, Brecksville, OH

Cert Number 57057 Disk Type Number BV Heads FA-7R Code Section VIII Valve Type 2600 and 2600S

Two disks were used in combination with the safety valve.

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
2	88	NICKEL	0.957	23-Jul-80

Cert Number 57057 Disk Type Number CSR Heads CSR-7RS Code Section VIII Valve Type 2600 and 2600S

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1.5	47	NICKEL	0.974	16-Nov-89

Farris Engineering, Brecksville, OH (Continued)

Cert Number 57057 Disk Type Number GFN Heads NF-7R Code Section VIII Valve Type 2600 and 2600S

Two disks were used in combination with the safety valves.

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
2	90	NICKEL	0.982	09-Sep-80

Cert Number 57057 Disk Type Number JRS Heads SRB-7RS Code Section VIII Valve Type 2600 and 2600S

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
3	40	NICKEL	0.967	08-Nov-78
4	35	NICKEL	0.98	08-Nov-78
3	52	HASTELLOY® C	0.959	17-Nov-82
1	50	HASTELLOY® B-2	1	27-Oct-83
1.5	23	MONEL ®	0.993	05-Jun-86
1.5	25	STAINLESS STEEL	0.993	05-Jun-86
1	40	INCONEL ®	0.996	28-May-87
4	17	HASTELLOY® C276	0.962	15-Oct-90
4	14	316 SS	0.975	06-May-91
4	14	HASTELLOY® C276	0.956	06-May-91

Cert Number 57057 Disk Type Number RB-90 Heads RB-7R Code Section VIII Valve Type 2600 and 2600S

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	75	NICKEL	0.977	08-Dec-78
1.5	54	NICKEL	0.967	08-Dec-78
2	45	NICKEL	0.964	08-Dec-78
3	37	INCONEL ®	0.994	02-Apr-87
3	62	INCONEL ®	0.912	02-Apr-87

Cert Number 57057 Disk Type Number RLS Heads SRB-7RS Code Section VIII Div. 1 Valve Type 2600 and 2600S

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	124.7	Nickel	0.987	03-May-84
3	53.1	Nickel	0.97	03-May-84
1	175	HASTELLOY® C276	0.994	27-Nov-84
1.5	141	HASTELLOY® C276	0.967	27-Nov-84
1	144	INCONEL ®	0.992	05-Mar-87
3	43	INCONEL ®	0.984	15-Apr-87
1.5	94	INCONEL ®	0.957	25-Aug-87
1	183	316 SS	0.978	05-Apr-90
3	74.5	HASTELLOY® C276	0.939	15-Oct-90

Farris Engineering, Brecksville, OH (Continued)

Cert Number 57057 Disk Type Number S90 Heads SRB-7RS
S90-7R Code Section VIII Valve Type 2600 and 2600S

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	125	NI & NI fluoropolymer	0.993	08-Dec-79
1	150	INC*, INC*/TEF* & MON/T*	0.963	08-Dec-79
1.5	90	NI & NI fluoropolymer	0.951	08-Dec-79
1.5	110	INC*, INC*/TEF* & MON/TEF*	0.951	08-Dec-79
2	75	NI & NI fluoropolymer	0.979	08-Dec-79
2	90	INC*, INC*/TEF*, MON/T*	0.988	08-Dec-79
3	40	NI & NI fluoropolymer	0.955	08-Dec-79
3	54	NI & NI	1	08-Dec-79
4	35	NI & NI	0.98	08-Dec-79
3	68	INCONEL®	0.992	02-Aug-86

Cert Number 57057 Disk Type Number XN Heads NX-7R Code Section VIII Valve Type 2600 and 2600S

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
2	83	316 SS	0.991	26-Oct-88

Kunkle Valve Div., Fort Wayne, IN

Cert Number 36997 Disk Type Number JRS Heads SRB-7RS Code Section VIII Valve Type 5000 through 5999 series

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	50	316 SS	0.998	13-Apr-81
3	35	316 SS	0.99	13-Apr-81

Cert Number 36997 Disk Type Number S90 Heads SRB-7RS
S90-7R Code Section VIII Valve Type 5000 through 5999 series

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	125	NICKEL	0.994	13-Apr-81
3	60	NICKEL	0.998	13-Apr-81

Nakakita Seisakusho Company, Limited, Daito

Cert Number 42039 Disk Type Number JRS Heads SRB-7RS Code Section VIII Valve Type NS255

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	39	NICKEL	0.991	07-Sep-89

Cert Number 42039 Disk Type Number RLS Heads SRB-7RS Code Section VIII Valve Type NS255

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	123	NICKEL	0.995	16-Nov-89

Nakakita Seisakusho Company, Limited, Daito (Continued)

Cert Number 42039 Disk Type Number S90 Heads SRB-7RS Code Section VIII Valve Type NS255

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	123	NICKEL	0.978	08-Sep-89

Safety Systems, UK Ltd., Worsley,

Cert Number 06039 Disk Type Number JRS Heads SRB-7RS Code Section VIII Valve Type WB 300/400

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	98.5	316-SS	0.993	20-Oct-83

Cert Number 06039 Disk Type Number S90 Heads SRB-7RS
S90-7R Code Section VIII Valve Type WB 300/400

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	148	Nickel	0.994	21-Oct-83

Pentair Valves & Controls US LP, Black (formerly Tyco Valves & Controls LP)

Cert Number 01157 Disk Type Number S90 Heads S90-7R Code Section VIII Valve Type 223/423/623/923

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	150	Inconel® fluoropolymer	0.96	21-Feb-78
2	73	Nickel	0.96	21-Feb-78
2	73	Nickel, fluoropolymer	0.96	21-Feb-78
6	38	Nickel	0.96	21-Feb-78
6	41.5	Monel® fluoropolymer	0.96	21-Feb-78

Cert Number 15208 Disk Type Number CSR Heads CSR-7RS Code Section VIII Div. 1 Valve Type JOS-E/JBS-E 8400 AC/AB

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1.5	50	Inconel ®	0.986	13-Aug-97

Cert Number 15208 Disk Type Number JRS Heads SRB-7RS Code Section VIII Valve Type JOS-E/JBS-E 8400 AC/AB

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	60	316 SS	0.993	23-Jul-81
1.5	23	MONEL®	0.981	04-Jun-86

Cert Number 15208 Disk Type Number RLS Heads SRB-7RS Code Section VIII Valve Type JOS-E/JBS-E 8400 AC/AB

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	138	MONEL®	0.981	01-Mar-91
1	172	HASTELLOY®	0.972	01-Mar-91
2	84.5	MONEL®	0.981	01-Mar-91

Pentair Valves & Controls US LP, Black (formerly Tyco Valves & Controls LP) continued

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
15208	S90	SRB-7RS S90-7R	VIII	JOS-E/JBS-E 8400 AC/AB

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	125	NICKEL	0.995	24-Jul-81
2	75	NICKEL	0.994	24-Jul-81

Pentair Valves & Controls US LP, Black (formerly Tyco Valves & Controls LP)

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
36100	JRS	SRB-7RS	VIII	910 to 919

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	50	316 SS	0.981	13-Apr-81

Cert Number	Disk Type Number	Heads	Code Section	Valve Type
36100	S90	SRB-7RS S90-7R	VIII	910 to 919

Min Size NPS	Min Set Pressure psi	Disk Material	CCF	Test Date
1	125	NICKEL	0.945	13-Apr-81

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