



BS&B SAFETY SYSTEMS, L.L.C.
BS&B SAFETY SYSTEMS LTD.

Nu-Saf™ Plus



Forward Acting Rupture Disks

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The System

FEATURES

- Sizes: 1" - 24" (25-600 mm)
- Pressures: 3 to 1800 psig (0.21 to 124 barg)
- Up to 85% operating ratio or to 90% of minimum burst pressure (CEN EN ISO 4126-2 pending)
- \pm 5% Burst Tolerance above 40 psig (2.76 barg)
- Metal-to-metal "bite-type" seal
- Tension loaded forward-acting, Damage Ratio <1
- Info-Tag identification

BENEFITS

- Liquid and gas service
- Easy installation
- Leak-tight
- Fail-safe if damaged
- Minimal flow resistance, low KR
- Vacuum resistant option at all burst pressures
- Choice of Safety Head design
 - Pre-assembled NX-7R™
 - Disk dome protecting NF-7R™
 - Pre-torqued, reinstallable NF-7RS™

The CEN standard requires that the operating pressure is expressed as a percentage of the minimum burst pressure.

Nu-Saf™ Plus

The Nu-Saf™ Plus system combines the benefits of advanced technology with simplicity. Reliable overpressure relief is assured with a range of rupture disks and Safety Heads which cover a wide range of applications and service pressures.



Overpressure relief from 3 psig (0.21 barg) to 1800 psig (124 barg) is assured in a range of sizes from 1 inch (25 mm) to 24 inch (600 mm).

The Nu-Saf Plus System consists of a choice of Safety Heads plus the XN™, XN-85™ or LCN™ Rupture Disks, depending upon the burst pressure and operating performance required. Refer to Figure below.

The XN and XN-85 Rupture Disks incorporate precision scoring technology in a metal, tension loaded design. The precision scoring design minimizes the possibility of disk fragmentation.

Operating pressure may be extended to 80% of the disk's marked burst pressure for the XN disk and up to 85% for the XN-85 disk or to 85%-90% of the specified minimum burst pressure.

These designs resist fatigue even after extended pressure cycle testing to

80/85% of the disk's marked burst pressure. The XN and XN-85 Rupture Disks can withstand full vacuum without the need for a vacuum support. The XN-85 is recommended for cyclic pressure service between vacuum and 85% of the disk's marked burst pressure or 90% of its minimum burst pressure.

For low pressure ranges the LCN Rupture Disk is available. This is a flat composite rupture disk comprised of three parts:

- (1) A slotted metal top section, the pressure controlling element.
- (2) A fluorocarbon* film seal, isolating the top section from the process.
- (3) Slotted vacuum support.

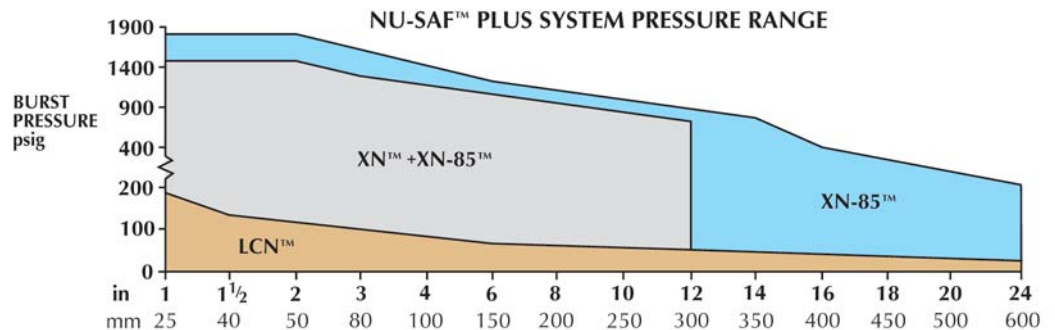
Full vacuum resistance is assured for burst pressures above 45 psig (3.1 barg). At or below 45 psig (3.1 bar g) the slotted metal bottom section will withstand partial vacuum up to 35% of the disk's marked burst pressure. Should full vacuum resistance be required the NXV-7R Safety Head with integral vacuum support should be used with LCN disks at or below 45 psig (3.1 bar g).

Safety Heads

The NX-7R Safety Head design incorporates several features which allow easy installation. The Quik-Sert™ NX-7R Safety Head fits inside the studs of two companion flanges. Asymmetric alignment pins in the Safety Head mate with location holes in the rupture disk to ensure centering and orientation of the disk. The flat seat design, in combination with a metal-to-metal "bite-type" seal, provides a leak-tight system. The NX-7R Safety Heads and the Nu-Saf Plus Rupture Disks are easily pre-assembled with side lugs (see photograph above).

Alternative Safety Head designs are the NF-7RS, and the NF-7R, both of which provide disk dome protection in all sizes resulting from their thicker outlets. The NF-7RS is a pre-torquable design which permits controlled assembly of the disk and Safety Head in the workshop, and allows for removal from service and re-installation of the disk and Safety Head assembled device. The NF-7R and NF-7RS Safety Heads share the same general design principles as the NX-7R.

*Teflon is generally used, other fluorocarbon film may be supplied.



XN-85™ Precision Scored High Performance Rupture Disk

- ◆ Solid metal
- ◆ Precision scored
- ◆ Designed for non-fragmentation
- ◆ Can withstand vacuum without support
- ◆ Operates up to 85% of the disk's marked pressure or 90% of minimum burst pressure (CEN standard pending)
- ◆ Liquid and gas service (acceptable for liquid service with compressible gas pocket between liquid and disk)
- ◆ Disk damaged or installed incorrectly will burst at marked burst pressure or lower: Damage Safety Ratio ≤ 1
- ◆ Info-Tag identification
- ◆ Can be used in pressure cycling conditions
- ◆ Optimum fatigue resistance for tension loaded disk technology
- ◆ Optional 0%, -5% and -10% manufacturing design range



The XN-85 is specially manufactured by forming the disk first and then scoring. This creates a minimally stressed score pattern offering optimum service life and an extended operating pressure limit of 85% of marked burst pressure or 90% of minimum burst pressure, even under cyclic conditions. Consult us with your particular operating requirements.

Manufacturing Design Range

The choice of a 0%, -5% or -10% manufacturing design range is available. The total range is placed on the minus side of requested burst pressure.

Example:

An XN-85 Rupture Disk is ordered with a 500 psig (34.47 bar g) burst pressure and a -5% manufacturing design range. The average value of the burst tests carried out during manufacture is used as the marked burst pressure shown on the tag and will be between 475 psig (32.75 barg) and 500 psig (34.47 barg). (*This exceeds ASME code requirements.*)

Note: Specify XN-85S for disks to fit into NX-7R Safety Heads.

Products protected by US patents 4441350, 4481850, 4751938 and other international patents.

Burst Tolerances

Burst tolerances are the maximum variation from the marked burst pressure.

Marked Burst Pressure	Tolerance
>40 psig (2.76 barg)	±5%
>40 psig (2.76 barg)	+2 psig (0.14 barg)

Alternatively the XN-85 disk may be marked with a minimum-maximum burst pressure in which case the burst test values must be within the min/max burst range.

Available Materials and Recommended Maximum Temperature

Aluminum	250°	121°
Nickel Alloy 200	750°	399°
Monel® Alloy 400	900°	482°
Inconel® Alloy 600	1100°	593°
316 Stainless Steel	900°	482°
Alloy C-276	900°	482°

Liners

Liners are available in all sizes on the process or downstream side (or both). Teflon is generally used, other appropriate fluorocarbon film may be supplied. Temperature range 40°F (-40°C) to 500°F (260°C).

Specifications: Min/Max Disk Burst Pressures at 72°F (22°C) psig (barg)

Consult factory for availability of other materials.

Disk Size		Aluminum				Nickel (Alloy 200)				Inconel® (Alloy 600)				Monel® (Alloy 400)				316 SS Alloy C-276			
in	mm	Minimum psig	Maximum barg	Minimum psig	Maximum barg	Minimum psig	Maximum barg	Minimum psig	Maximum barg	Minimum psig	Maximum barg	Minimum psig	Maximum barg	Minimum psig	Maximum barg	Minimum psig	Maximum barg	Minimum psig	Maximum barg		
1	25	113	7.8	188	13.0	188	13.0	1500	103.4	225	15.6	1800	124.1	225	15.6	1500	103.4	335	23.1	1800	124.1
1 1/2	40	81	5.6	135	9.3	135	9.3	1500	103.4	165	11.4	1800	124.1	165	11.4	1500	103.4	250	17.2	1800	124.1
2	50	68	4.7	113	7.8	113	7.8	1350	93.1	135	9.3	1800	124.1	135	9.3	1350	93.1	200	13.8	1800	124.1
3	80	54	3.7	90	6.2	90	6.2	1250	86.1	108	7.5	1600	110.3	108	7.5	1250	86.1	160	11.1	1600	110.3
4	100	45	3.1	75	5.2	75	5.2	1200	82.7	90	6.2	1400	96.5	90	6.2	1200	82.7	135	9.3	1400	96.5
6	150	36	2.5	60	4.1	60	4.1	1100	75.8	72	5.0	1150	79.2	72	5.0	1100	75.8	125	8.7	1200	82.7
8	200	-	-	-	-	53	3.7	1000	68.9	63	4.4	1050	72.3	63	4.4	1000	68.9	120	8.3	1100	75.8
10	250	-	-	-	-	45	3.1	900	62.0	54	3.7	950	65.5	54	3.7	900	62.0	115	8.0	1000	68.9
12	300	-	-	-	-	41	2.8	750	51.7	50	3.5	850	58.6	50	3.5	750	51.7	110	7.6	900	62.0
14	350	-	-	-	-	35	2.4	500	34.4	42	3.0	700	48.2	42	3.0	500	34.4	100	6.9	800	55.1
16	400	-	-	-	-	33	2.3	270	18.6	39	2.7	350	24.1	39	2.7	270	18.6	90	6.2	400	27.5
18	450	-	-	-	-	33	2.3	200	13.7	38	2.7	260	17.9	38	2.7	200	13.7	85	5.9	300	20.6
20	500	-	-	-	-	32	2.2	170	11.7	36	2.5	220	15.1	36	2.5	170	11.7	80	5.5	250	17.2
24	600	-	-	-	-	30	2.1	140	8.6	33	2.2	180	12.4	33	2.2	140	8.6	70	4.9	200	13.7

XN™ Precision Scored Rupture Disk

- ◆ Solid metal
- ◆ Precision scored
- ◆ Designed for non-fragmentation
- ◆ Can withstand vacuum without support
- ◆ Operates up to 80% of the disk's marked pressure or 85% of minimum burst pressure (CEN standard pending)
- ◆ Liquid and gas service (acceptable for liquid service with compressible gas pocket between liquid and disk)
- ◆ Damaged disks will burst at marked pressure or lower. Damage Safety Ratio ≤ 1
- ◆ Info-Tag identification



Specifications: Min/Max Disk Burst Pressures at 72°F (22°C) psig (barg)

Disk Size		Minimum Pressures												Maximum Pressures	
		Aluminum		Nickel (Alloy 200)		Monel® (Alloy 400)		Inconel® (Alloy 600)		Alloy C-276		316 SS		All Materials	
in	mm	psig	barg	psig	barg	psig	barg	psig	barg	psig	barg	psig	barg	psig	barg
1	25	60	4.1	70	4.8	115	7.9	115	7.9	180	12.4	125	8.6	1450	100
1 1/2	40	55	3.8	65	4.5	105	7.3	105	7.3	170	11.8	115	7.9	1450	100
2	50	55	3.8	60	4.2	90	6.2	90	6.2	160	11.0	110	6.9	1450	100
3	80	55	3.8	65	4.5	75	5.2	75	5.2	140	9.7	95	6.6	1300	89.6
4	100	55	3.8	80	5.5	90	6.2	90	6.2	155	10.7	95	6.6	1150	79.2
6	150	55	3.8	85	5.9	95	6.6	95	6.6	165	11.4	95	6.6	1040	71.7
8	200	55	3.8	85	5.9	100	6.9	100	6.9	175	12.1	95	6.6	960	66.1
10	250	-	-	90	6.2	105	7.3	105	7.3	185	12.8	90	6.2	840	59.7
12	300	-	-	90	6.2	110	7.6	110	7.6	200	13.8	90	6.2	720	49.6

Manufacturing Design Range**

A -10 % design range is standard. The total range is placed on the minus side of requested burst pressure. A -5% manufacturing design range may be selected as operating conditions require.

Example:

A XN Rupture Disk is ordered with a 725 psig (50 barg) burst pressure and a -5% manufacturing design range. The average value of the burst tests carried out during manufacture is used as the marked burst pressure shown on the tag and will be between 689 psig (47.5 barg) and 725 psig (50 barg). (This exceeds ASME code requirements).

Alternatively, the XN disk may be marked with a minimum-maximum burst pressure in which case the burst test values must be within the min/max burst range.

**Manufacturing Design Range is a range of pressure within which the marked burst pressure must fall to be acceptable for a particular requirement as agreed upon between the rupture disk manufacturer and the user of his agent.

Burst Tolerances

Burst Tolerances are the maximum variation from the marked burst pressure. Burst tolerance for the XN disk is +/- 5%.

Available Materials and Recommended Maximum Temperature

Aluminium	250°F	121°C
Nickel 200	750°F	399°C
Monel® Alloy 400	900°F	482°C
Inconel® Alloy 600	1100°F	593°C
316SS	900°F	482°C
Alloy C-276	900°F	482°C

Liners

Liners are available in all sizes on the process or downstream side (or both). Teflon is generally used, other appropriate fluorocarbon film may be supplied. Temperature range -40°F (-40°C) to 500°F (260°C).

Teflon is a registered trademark of DuPont. Inconel and Monel are registered trademarks of Inco Alloys International Inc.

LCN™ Low Pressure Rupture Disk

- ♦ Flat composite metal design
- ♦ Fluorocarbon film seal
- ♦ Can withstand full vacuum
- ♦ Operates up to 80%* of the disk's marked pressure or 85% of minimum burst pressure (CEN standard pending)
- ♦ Suitable for liquid and gas applications
- ♦ Damaged disks will burst at marked burst pressure or lower.
Damage Safety Ratio ≤ 1
- ♦ Standard materials of construction
316SS/fluorocarbon film/316SS.
Consult us for other materials
- ♦ Info-Tag identification

*At marked burst pressures ± 15 psig (1.03 barg) operating pressures up to 80% (of the disk's marked burst pressure, minus tolerance)



Specifications: Min/Max Disk Burst Pressures at 72°F (22°C) psig (barg)

Disk Size		Material 316SS/Fluorocarbon Film/316SS			
		Minimum		Maximum	
in	mm	psig	barg	psig	barg
1	25	14	0.97	188	12.96
1 1/2	40	12	0.83	135	9.30
2	50	7	0.49	113	7.79
3	80	5	0.35	90	6.20
4	100	5	0.35	75	5.17
6	150	3	0.21	60	4.13
8	200	3	0.21	53	3.65
10	250	3	0.21	45	3.10
12	300	3	0.21	41	2.82
14	350	3	0.21	35	2.41
16	400	3	0.21	33	2.27
18	450	3	0.21	33	2.27
20	500	3	0.21	32	2.20
24	600	3	0.21	30	2.06

Manufacturing Design Range

The available manufacturing design range depends upon the burst pressure required. The total range is placed on the minus side of requested burst pressure.

Burst Pressure	Manufacturing Design Range
≥ 40 psig (2.76 bar g)	-5% or -10%
> 15 psig (1.03 bar g) and 140 psig (2.76 bar g)	-10%
≤ 15 psig (1.03 bar g)	0%*

* The requested burst pressure is the marked burst pressure.

Example:

An LCN™ Rupture Disk is ordered with a 50 psig (3.45 bar g) burst pressure and a -10% manufacturing design range. The average value of the burst test carried out during manufacture is used as the marked burst pressure shown on the tag and will be between 45 psig (3.1 bar g) and 50 psig (3.45 bar g). (This exceeds ASME code requirements.)

Burst Tolerance

Burst Tolerances are the maximum variation from the marked burst pressure.

* Exceeds ASME code requirements.

Marked Burst Pressure	Burst Tolerance
< 7 psig (0.48 barg)	± 1 psig (0.069 barg)*
7 psig (0.48 barg)	
< 15 psig (1.03 barg)	± 1.5 psig (0.1 barg)*
15 psig (1.03 barg)	
< 40 psig (2.76 barg)	± 2 psig (0.138 barg)
> 40 psig (2.76 barg)	$\pm 5\%$

The Burst Tolerance includes the manufacturing design range for burst pressures ≥ 15 psig (1.03 bar g). Alternatively the LCN™ disk may be marked with a minimum-maximum burst pressure, in which case the burst test values must be within the min-max burst range.

Recommended Temperature Limits		
Minimum	-40° F	-40° C
Maximum	400° F	204° C

Vacuum and Back Pressure Resistance

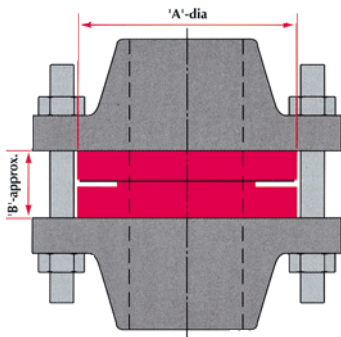
All burst pressures at or above 45 psig (3.1 bar g) allow the LCN™ disk to resist full vacuum. At lower burst pressures the LCN™ disk will resist partial vacuum up to the equivalent of 35% of the marked burst pressure, greater vacuum resistance can be provided by the NXV-7R™ Safety Head which has an integral vacuum support.

For back pressure resistance exceeding 15 psig (1.03 barg) the NXV-7R™ Safety Head shall be used. Consult us for maximum back pressure resistance. The NXV-7R™ Safety Head with integral vacuum support will reduce the free flow area by up to 40%.

NX-7R™ and NXV-7R™ Safety Heads

NX-7R and NXV-7R Safety Head Specifications

- ◆ Quik-Sert™ reduced diameter fits between the studs of two companion flanges
- ◆ Positive locating pins ensure centering and orientation of disk in the Safety Head
- ◆ Metal-to-metal “bite-type” seal prevents leakage
- ◆ The inlet and outlet of the NX-7R™ Safety Head and Rupture Disk are held together by side lugs
- ◆ Standard material 316SS. Consult BS&B for other materials
- ◆ Optional dial type vacuum resistance for LCN™ disks with burst pressure below 45 psig (3.1 bar g). (Type NXV-7R™). Free flow area will be reduced by approximately 40%. Consult BS&B Safety Systems, Inc. or BS&B Safety Systems Ltd. for specific value.

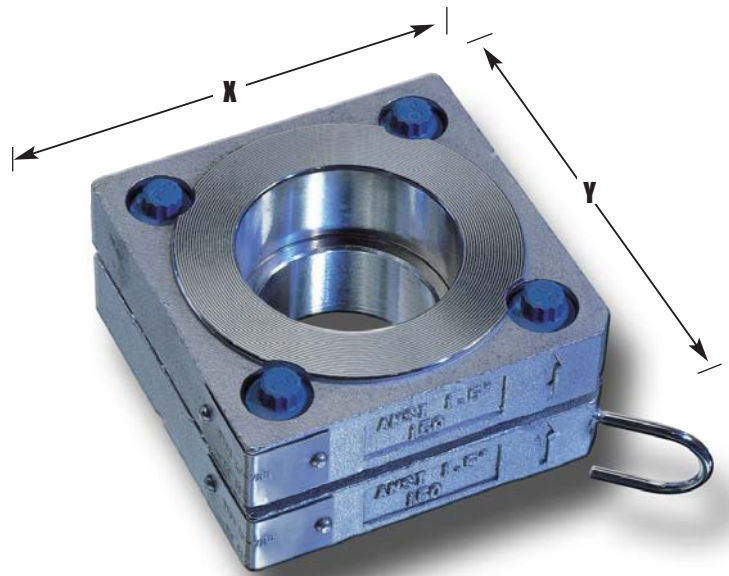


Notes. Consult BS&B Safety Systems, Inc. or BS&B Safety Systems Ltd. for tongue/groove applications. 1/4" NTP is available in outlet when used for Relief Valve isolation. Disk sizes 4" and above require use of Safety Heads type NF-7R™ and NF-7RS™ to ensure dome protection of XN™ or XN-85™ disks.

Nominal Size		Safety Head Flange Rating				Outside Diameter		Overall Height	
in	mm	ANSI & BS 1560	BS 4504 & DIN	JIS	BS 10	in	mm	in	mm
1	25	150			D-E	2.625	67	1.375	35
		300/600	10/16/25/40	10/16/20/30/40	F	2.813	71	1.375	35
1 1/2	40	150			D-F	3.375	86	1.375	35
		300/600	10/16/25/40	10/16/20/30		3.625	92	1.375	35
				40		3.814	97	1.375	35
2	50				D-E	3.75	96	1.375	35
		150		10/16/20/30/40		4.00	102	1.375	35
3	80	300/600	10/16/25/40		F	4.25	108	1.375	35
					D-E	5.00	128	1.375	35
		150		10		5.25	134	1.375	35
4	100			16/20/30/40		5.50	140	1.375	35
		300	10/16/25/40		F	5.69	144	1.375	35
				10		6.25	159	1.375	35
6	150		10/16	16/20	D-E	6.375	162	1.375	35
		150	25/40	30	F	6.69	170	1.375	35
		300				7.00	178	1.375	35
8	200			40		7.25	183	1.375	35
		150	10/16	10	D-E	8.50	218	1.375	35
		300		16		9.25	235	1.375	35
10	250					9.75	248	1.375	35
			25/40			8.81	224	1.375	35
					F	9.375	238	1.375	35
12	300			10		10.625	270	1.625	41
		150	10/16	16	D-E	10.75	274	1.625	41
			25			11.00	280	1.625	41
14	350		40			11.125	284	1.625	41
		300			F	11.375	290	1.625	41
						11.875	302	1.625	41
16	400					12.00	305	1.625	41
			10/16	10		12.90	328	1.81	46
		150			D-E	13.25	337	1.81	46
18	450		25			13.40	340	1.81	46
			40	16/20	F	14.00	356	1.81	46
		300		30		14.10	359	1.81	46
20	500			40		14.80	377	1.81	46
				10		14.90	378	2.44	62
			16		D-E	15.00	381	2.44	62
24	600		25			15.70	400	2.44	62
		150		16/20		15.90	403	2.44	62
		300	40	30	F	16.25	413	2.44	62
28	700			40		16.40	417	2.44	62
				10		17.00	431	2.44	62
				10		16.50	420	2.83	72
32	800					17.20	438	2.83	72
		150	16	16/20	D-E	17.50	444	2.83	72
			25			18.00	457	2.83	72
36	900			30	F	18.10	460	2.83	72
			40	40		18.70	474	2.83	72
		300				19.00	483	2.83	72
40	1000			10		19.00	483	3.23	82
			10		D-E	19.25	489	3.23	82
			16			19.50	495	3.23	82
48	1200			16/20		20.00	507	3.23	82
		150	25			20.10	511	3.23	82
				30	F	20.50	521	3.23	82
56	1400			40		20.90	531	3.23	82
		300				21.10	536	3.23	82
			40			21.50	546	3.23	82
64	1600			10		21.20	538	3.23	82
		150			D-E	21.50	546	3.23	82
				16/20		22.50	572	3.23	82
72	1800				F	22.75	578	3.23	82
		300				23.40	594	3.23	82
			10	10		23.30	593	6.61	168
80	2000					23.75	603	6.61	168
		150	16		D-E	24.30	617	6.61	168
			25			24.60	624	6.61	168
96	2400			16/20		24.70	627	6.61	168
		300			F	25.25	641	6.61	168
						25.60	651	6.61	168
112	2800			10		27.40	695	6.61	168
		150			D-E	28.10	714	6.61	168
			16/25	16/20		28.50	724	6.61	168
128	3200					28.80	731	6.61	168
		300				30.40	772	6.61	168

NF-7RS™ Safety Head

- ◆ Locates between studs of two companion flanges
- ◆ Pretorqueable design
- ◆ Locating pins ensure centering and orientation of disk within the Safety Head
- ◆ Metal-to-metal "bite-type" seal
- ◆ Standard materials 316SS and carbon steel. Consult BS&B for other materials
- ◆ Disk dome protected by Safety Head outlet
- ◆ Disk and Safety Head can be removed from service, inspected and reinstalled provided capscrews are retained in place and the capscrew torque is maintained
- ◆ For extra protection, a J-bolt is standard. The Safety Heads can only fit between the companion flanges in the one direction that allows the J-bolt to mate with the drilled hole in the companion flange inlet, correct flow direction is thus assured.



US patent 4751938 and other international patents

NF-7RS Safety Head Specifications

Nominal Size		Safety Head Flange Rating			Overall Height		Outside Dimensions				Shape
in	mm	ANSI	DIN	JIS	in	mm	X		Y		
							in	mm	in	mm	
1	25	150	-	-	1.480	38	2.62	67	2.62	67	square
		300/600	10/16/25/40	10/16/20/30/40	1.480	38	2.88	73	2.88	73	square
1 1/2	40	150	-	10/16/20	1.680	43	3.38	86	3.38	86	square
		300/600	10/16/25/40	30/40	1.680	43	3.74	95	3.74	95	square
2	50	150/300/600	10/16/25/40	10/16/20/30/40	1.880	48	4.11	104	4.11	104	square
3	80	150/300/600	10/16/25/40	16/20/30/40	2.170	55	5.24	133	5.24	133	square
		-	-	10	2.170	55	5.19	132	5.19	132	square
4	100	150/300	10/16/25/40	16/20/30/40	2.880	73	6.22	158	6.22	158	square
		-	-	10	2.880	73	6.22	158	6.22	158	square
		600	-	-	2.562	65	7.56	192	7.56	192	round
6	150	150/300	10/16/25/40	10/30	3.624	92	9.75	248	9.75	248	round
		600	-	-	4.500	114	10.38	264	10.38	264	round
8	200	150/300	-	-	3.812	97	12.00	305	12.00	305	round
10	250	150/300	-	-	4.313	110	14.12	359	14.12	359	round
12	300	150	-	-	4.750	121	16.00	406	16.00	406	round
		300	-	-	5.250	133	16.50	419	16.50	419	round
14	350	150	-	-	5.250	133	17.75	451	17.75	451	round
		300	-	-	5.875	149	19.60	483	19.60	483	round
16	400	150	-	-	6.380	162	20.12	511	20.12	511	round
		300	-	-	7.125	181	21.12	536	21.12	536	round
18	450	150	-	-	7.375	187	22.75	578	22.75	578	round
		300	-	-	7.875	200	23.38	594	23.38	594	round
20	500	150	-	-	8.437	241	24.75	629	24.75	629	round
		300	-	-	8.625	219	25.62	651	25.62	651	round
24	600	150	-	-	10.250	260	29.50	749	29.50	749	round
		300	-	-	10.750	273	30.38	772	30.38	772	round

Notes. Consult BS&B Safety Systems, Inc. or BS&B Safety Systems Ltd. for tongue/groove applications. 1/4" NTP is available in outlet when used for Relief Valve isolation.

NF-7R™

Safety Head

- ◆ Specifications same as NX-7R™ but Safety Head outlet protects dome of disk.



NF-7R™ Safety Head Specifications

Nominal Size		Safety Head Flange Rating			Overall Height		Outside Diameter	
in	mm	ANSI	DIN	JIS	in	mm	in	mm
1	25	150	6	-	1.500	38	2.50	64
		300/600	10/16/25/40	10/16/20	1.500	38	2.75	70
1 1/2	40	150	-	-	1.500	38	3.25	83
		300/600	10/16/25/40	-	1.500	38	3.62	92
2	50	150	-	-	1.500	38	4.00	102
		300/600	-	30/40	1.500	38	4.25	108
3	80	150	-	-	1.750	44	5.25	133
		300/600	63	30/40	1.593	40	5.75	146
4	100	150	63	-	2.250	57	6.75	171
		300	-	40	2.250	57	7.00	178
		600	-	63	2.875	73	7.50	191
		-	63	30	2.875	73	6.69	170
6	150	150	-	-	2.812	71	8.62	219
		300	-	30	2.812	71	9.75	248
		600	-	-	3.062	78	10.38	264
8	200	150	-	-	3.187	81	10.88	276
		300	-	-	3.187	81	12.00	305
10	250	150	-	-	4.313	110	13.25	337
		300	-	-	4.313	110	14.12	359
12	300	150	-	-	4.500	114	16.00	406
		300	-	-	4.500	114	16.50	419
14	350	300	-	63	5.625	146	19.00	483
16	400	-	25	30	5.575	142	20.12	511
18	450	150	-	16/20	7.500	191	21.50	546
		300	-	-	7.500	191	23.38	594
20	500	150	-	-	6.250	159	23.75	603
24	600	150	-	-	7.000	178	28.12	714
		300	-	-	7.750	197	30.38	772

NOTE: Products, specifications, and all data in this literature are subject to change without notice. Questions regarding product selection and specifications for specific applications should be directed to BS&B Safety Systems, Inc. or BS&B Safety Systems Ltd. Attn: Customer Service Dept.



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