

TYPE XT[™] Rupture Disk



Advanced Rupture Disk Performance
from a Forward Acting, Tension Loaded Design

Type XT™ Advanced Rupture Disk

Performance from a Forward Acting, Tension Loaded Design

Features

- Sizes 1-10 inches (25-250mm)
- Seven standard materials; wide range of corrosion resistance - Refer to the material temperature table
- 'X' shaped score pattern; designed for non-fragmentation; excellent for relief valve isolation.
- Smooth surface on process side; resistant to product accumulation
- Operates up to 80% of marked burst pressure or 85% of minimum burst pressure
- Designed for gas service or liquid service
- High flow capacity / low flow resistance: certified for gas and liquid service
- Fail safe: design safety ratio < 1
- 1 piece solid metal construction; excellent leak tightness
- Withstands full vacuum without support
- Available "CE" marked or ASME stamped (UD)

A 90% operating pressure ratio may apply under static operating conditions; consult factory



Material	Maximum recommended temperature	
Nickel alloy 200	750°F	399°C
Monel® alloy 400	900°F	482°C
Inconel® alloy 600	1100°F	593°C
Stainless steel 316	900°F	482°C
Hastelloy® (alloy C-276 or C-22)	900°F	482°C
Aluminum	250°F	121°C
Tantalum	500°F	260°C

Burst Pressure Capabilities for gas and liquid applications at 72°F (22°C)

Nominal size		Aluminum				Nickel alloy 200 & tantalum				Inconel® alloy 600 & Monel® alloy 400				316ss				Hastelloy® alloy C-276, C-22			
in	mm	psig		barg		psig		barg		psig		barg		psig		barg		psig		barg	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1	25	80	1450	6	100	165	1450	11	100	165	1450	11	100	175	1450	12	100	240	1450	17	100
1.5	40	55	1450	4	100	115	1450	8	100	115	1450	8	100	125	1450	9	100	176	1450	12	100
2	50	45	1450	3	100	105	1450	7	100	105	1450	7	100	115	1450	8	100	160	1450	11	100
3	80	45	1300	3	100	90	1300	6	90	90	1300	6	90	100	1300	7	90	140	1300	10	90
4	100	40	1150	3	79	90	1150	6	79	90	1150	6	79	95	1150	7	79	140	1150	10	79
6	150	40	1040	3	72	90	1040	6	72	90	1040	6	71	90	1040	6	72	130	1040	9	72
8	200	40	960	3	66	85	960	6	66	85	960	6	66	90	960	6	66	130	960	9	66
10	250	-	-	-	-	85	840	6	58	85	840	6	58	90	840	6	58	125	840	9	58

Optional liner: A fluoro carbon film liner is available as an option on the process side of the XT disk.

Temperature Range for Standard Liner Materials:

FEP -40°F to 400°F (-40°C to 205°C); PTFE -40°F to 500°F (-40°C to 260°C)

Operating Pressure Ratio

Type XT rupture disks can be operated up to 90% of their minimum burst pressure. For highly cyclic service conditions, especially when combined with a 90% operating ratio, reverse buckling disks are recommended. For example, type Sigma EXL™ (see catalog 77-4011) is designed for operation up to 100% of minimum burst pressure. Consult BS&B for guidance.

Vacuum and Back Pressure

All type XT rupture disks are designed to resist vacuum or a back pressure of 1 atmosphere. Should a combination of vacuum and back pressure exist, this must not exceed 14.5 psig (1barg), consult BS&B for guidance.

Differential Pressure

Rupture disks respond to differential pressure. Service conditions at the inlet and outlet of a rupture disk device must be taken into account when completing specifications.

NX-7R™ Safety Head Specifications

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				2.5	63.5	1.38	35
		300/600	10/16/25/40	10/16/20/30	F	2.75	69.85	1.38	35
1.5	40	150				3.25	82.55	1.38	35
		300/600	10/16/25/40			3.62	91.95	1.38	35
2	50	150				4	102	1.38	35
		300/600	10/16/25/40			4.21	107	1.38	35
3	80	150		10		5.25	134	1.38	35
		300	10/16/25/40		F	5.69	144	1.38	35
					D-E	5.03	128	1.38	35
4	100	150				6.75	171.5	1.38	35
			25/40	30	F	6.69	170	1.38	35
		300				7	178	1.38	35
				10		6.25	159	1.38	35
				40		7.19	183	1.38	35
			10/16	16/20	D-E	6.38	162	1.38	35
6	150	150				8.62	219	1.38	35
		300	63	30		9.75	248	1.38	35
			25/40			8.81	224	1.38	35
8	200	150	10/16		D-E	10.78	274	1.62	41
		300				12	304.8	1.62	41
			25			11.19	284	1.62	41
			40			11.41	290	1.62	41
					F	11.88	302	1.62	41
10	250	150			D-E	13.25	336.5	2.4	60
		300		30		14.1	359	1.81	46
			10/16	10		12.9	328	1.81	46
			25			13.4	340	2.2	55
			40	16/20	F	13.9	352	2.4	60
				40		14.8	377	1.81	46

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Safety Heads for XT Rupture Disk

The XT rupture disk is designed for use in the following safety head types:

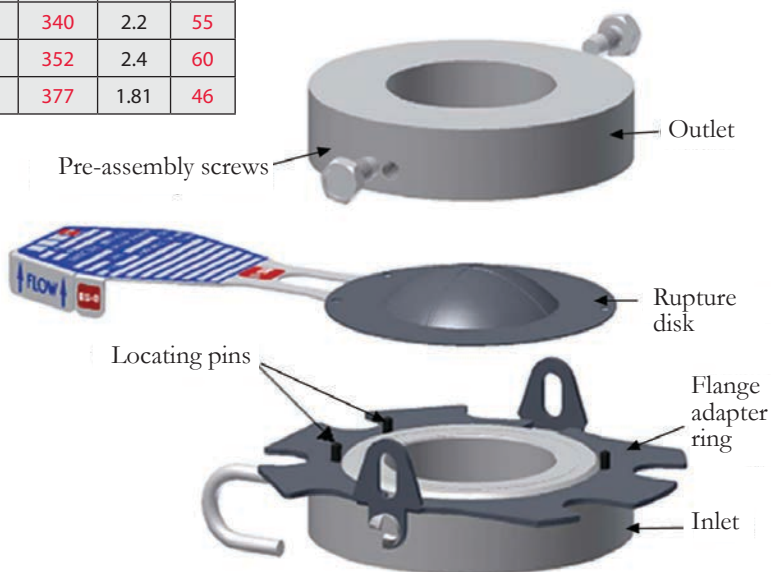
- NF-7R
 - NX-7R*
 - TL-7R
 - NF-7RS (pre-torqued)
- *For ASME compliance, the NX-7R holder is required

Material Choices

The XT rupture disk is available in a choice of seven materials to provide a wide range of options for the user to achieve compatibility with the application process conditions. Selection of the correct rupture disk material is important: corrosion of disk material will affect performance.

It is important that each material be applied within its recommended service limit. The thermal stability of alloy 600 exhibits the least variation in burst pressure relative to temperature for the XT rupture disk. Consult BS&B for details.

Type XT rupture disk with type TL-7R safety head



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