

# STD RUPTURE DISK

Oseco's STD Rupture Disk is a pressure-relieving safety device that is used in many applications. It has a 30° angular seating area and is used primarily to vent to controlled areas or to the atmosphere.

The STD is designed for operation in applications where normal system pressures do not exceed 70% of the stamped burst pressure. This will insure long and excellent service life.

The STD is a solid metal crowned or pre-bulged disk and is designed for a wide variety of applications.

The STD excels in gas or liquid applications and a variety of temperature and pressure extremes.

The STD comes in a wide variety of materials and sizes. Liners are made primarily of PFA fluoropolymer; consult the Oseco factory for specifics regarding your particular application.

*The STD is Oseco's original rupture disk, tension-loaded and economical.*



### Oseco STD Rupture Disk

- Standard sizes: 1/2" - 24": consult Oseco factory for other available sizes.
- Standard materials: 316 Stainless Steel, Nickel-200/201, Inconel®-600, Monel®-400 and Aluminum.
- Pressures range from 2 psig to 30,000 psig; special applications may require reduced pressure ranges. Please consult the Oseco factory.
- Vacuum service: If the STD is subjected to vacuum conditions, it may be necessary to use a vacuum support with the STD disk. The STDV (*STD with vacuum support*) is designed to withstand a minimum 15 psig of differential back-pressure and can be supplied for higher back-pressures on request. If the burst pressure is high enough, vacuum supports are not required. **See Table 1.**
- Manufacturing Range: All Oseco rupture disks are produced to meet a Standard Manufacturing Range. The manufacturing range is a range of pressures within which the average burst pressure of test disks must fall to be acceptable for a particular burst pressure. In many situations Oseco can manufacture STD rupture disks in reduced manufacturing ranges. Please consult Oseco for your particular application. **See Table 2.**
- Burst Tolerance: the maximum variation from the stamped burst pressure. **See Table 3.**
- Minimum and maximum burst pressures are listed for all standard sizes and standard materials. Fluoropolymer liners on one side and two sizes. **See Table 4.** Consult the Oseco factory for sizes and materials not listed.

**TABLE 1**  
Angular Seat STD Rupture Disks Vacuum Support Requirements

Disk Material	Full Vacuum	2/3-Vacuum	1/2-Vacuum
Nickel-200/201	1200 psig	975 psig	725 psig
Inconel-600	1200 psig	975 psig	725 psig
Monel-400	1200 psig	975 psig	725 psig
Hastelloy C-276	1200 psig	975 psig	725 psig
316 Stainless Steel	1200 psig	975 psig	725 psig
Aluminum	450 psig	360 psig	270 psig

If the burst pressure of a rupture disk at operating temperature is below these minimum pressures, a vacuum support is required. For back pressures greater than 14.7 psi and other disk metals, consult factory.

**TABLE 2**  
Standard Manufacturing Ranges For STD Rupture Disks

Specified Rupture Pressure PSIG @ 72° F	Manufacturing Range %
3 – 6	+40 to -20
7 – 10	+30 to -15
11 – 15	+20 to -10
16 – 25	+16 to -8
26 – 45	+14 to -7
46 – 90	+12 to -6
91 – 270	+10 to -5
271 – 500	+8 to -4
501 – UP	+6 to -3

**TABLE 3**

**Burst Tolerances For STD Rupture Disks**

Marked Rupture Pressure @ 72° F	Burst Tolerance
3 – 40	± 2 PSIG
over 40	± 5 %

**TABLE 4**

**Minimum / Maximum Burst Pressure For STD Rupture Disks @ 72° F (psig)**

Disk Size (Inches)		METAL					METAL WITH FLUOROPOLYMER ON 1 SIDE					METAL WITH FLUOROPOLYMER ON 2 SIDES				
		316	Ni	Mo	Inc	Al	316 FP*	Ni FP*	Mo FP*	Inc FP*	Al FP*	316 FP*	Ni FP*	Mo FP*	Inc FP*	Al FP*
1/2	MIN	625	280	340	440	80	820	500	500	790	235	910	600	600	790	380
	MAX	30,000	20,000	25,000	30,000	1,500	10,000	6,000	6,000	10,000	1,500	10,000	6,000	6,000	10,000	1,500
11/16	MIN	455	200	250	325	55	650	370	420	500	225	740	460	510	590	315
	MAX	1,000	1,000	1,000	1,000	650	1,000	1,000	1,000	1,000	650	1,000	1,000	1,000	1,000	650
1	MIN	320	145	175	225	40	370	195	225	275	90	420	245	275	325	140
	MAX	12,000	8,000	10,000	12,000	1,000	5,000	3,000	3,000	5,000	1,000	5,000	3,000	3,000	5,000	1,000
1-1/2	MIN	210	95	115	150	26	245	130	150	185	60	280	165	185	220	95
	MAX	6,000	6,000	6,000	6,000	750	3,400	2,000	2,000	3,400	700	3,400	2,000	2,000	3,400	700
2	MIN	120	55	67	87	16	145	79	91	110	40	170	105	115	135	64
	MAX	6,000	4,000	4,500	6,000	570	1,800	1,300	1,300	1,800	500	1,800	1,300	1,300	1,800	500
3	MIN	90	41	49	63	12	105	55	63	77	26	120	69	77	91	40
	MAX	6,000	2,500	3,200	4,000	460	1,500	900	900	1,500	400	1,500	900	900	1,500	400
4	MIN	68	31	37	48	9	79	42	48	59	20	90	53	59	70	31
	MAX	6,000	1,900	2,400	3,000	360	1,100	650	650	1,100	325	1,100	650	650	1,100	325
6	MIN	51	23	28	36	7	59	31	36	44	15	67	39	44	52	23
	MAX	3,600	1,400	1,800	2,200	275	800	500	500	800	240	800	500	500	800	240
8	MIN	40	18	22	28	5	46	24	28	34	11	52	30	34	40	17
	MAX	2,100	1,100	1,450	1,700	205	600	375	375	600	180	600	375	375	600	180
10	MIN	30	14	17	22	4	35	19	22	27	9	40	24	27	32	14
	MAX	1,400	800	1,150	1,400	165	500	300	300	500	135	500	300	300	500	135
12	MIN	27	12	15	19	4	31	16	19	23	8	35	20	23	27	12
	MAX	1,000	670	960	1,000	140	400	250	250	400	110	400	250	250	400	110
14	MIN	23	11	13	17	3	-	-	-	-	-	-	-	-	-	-
	MAX	750	570	750	725	125	-	-	-	-	-	-	-	-	-	-
16	MIN	20	9	11	15	3	-	-	-	-	-	-	-	-	-	-
	MAX	500	410	500	500	105	-	-	-	-	-	-	-	-	-	-
18	MIN	18	8	10	13	3	-	-	-	-	-	-	-	-	-	-
	MAX	475	445	475	475	95	-	-	-	-	-	-	-	-	-	-
20	MIN	16	8	9	12	2	-	-	-	-	-	-	-	-	-	-
	MAX	450	400	450	450	85	-	-	-	-	-	-	-	-	-	-
24	MIN	44	37	55	45	2	-	-	-	-	-	-	-	-	-	-
	MAX	230	145	450	230	71	-	-	-	-	-	-	-	-	-	-
Maximum Temp (° F)		900	750	800	900	250	500	500	500	500	250	500	500	500	500	250

\* FP Indicates Virgin Fluoropolymer. PFA, FEP or PTFE may be product specific and used at Oseco's discretion. Some Aluminum disks require additional leadtime. Consult factory.

**SENSORS**

Sensors used with the STD rupture disk are the SVT, AMS, and the CMS. Consult Oseco for details.

**HOLDERS**

Holders that can be used with the STD rupture disk are the Union Holders, the RDI insert, the RDI(P) and the flanged bolted holders (RDH-1 through RDH-9).