

CO RUPTURE DISK

The Oseco CO rupture disk is a composite style rupture disk. It consists of a metal slotted top section, a slit-slot cover and a fluoropolymer or metal seal. The metal top section controls the burst pressure and the seal isolates the top section from the process media and also prevents leakage.

The composite construction of the CO gives it its name. It may include options such as a metal seal, fluoropolymer liners, metal support rings and vacuum supports, all of which may be incorporated into the disk's configuration.

The CO rupture disk is available in both the 30° angular seat (CO) and the flat seat designs, (F)CO. The patented, optional "tear drop" feature of the CO reduces the possibility of fragmentation. The CO is excellent for liquid, gas or vapor service applications. For best results, the CO should not be exposed to pressures in excess of 80% of its stamped burst pressure.

The CO is Oseco's high-quality, multi-layered rupture disk.



Oseco CO Rupture Disk

- Standard sizes available are 11/16"- 24". Consult Oseco for other available sizes.
- Pressure ranges are 3 psig to 2000 psig. Special applications may require reduced manufacturing ranges; please consult factory.
- Standard materials for the CO rupture disk: 316 Stainless Steel, Nickel 200/201, Inconel®-600 and Monel®-400. Oseco uses quality PFA fluoropolymer. For additional materials, please consult the Oseco factory.
- If the CO rupture disk is subjected to vacuum conditions, it is necessary to have a vacuum support to complement the rupture disk (specify type COV).
- Excellent for static or high-cycling service.
- "Tear drop" feature helps reduce the possibility of fragmentation (*See figure 1*).
- Available in flat seat or 30° angular seat designs.



Figure 1



TABLE 1
Standard Manufacturing Design Ranges for CO Rupture Disks

Specified Rupture Pressure @ 72° F	Manufacturing Design Range %
3 – 8	+40 to –40
9 – 12	+30 to –30
13 – 20	+20 to –10
21 – 45	+16 to –8
46 – 90	+12 to –6
91 – 270	+10 to –5
271 – Up	+6 to –3

TABLE 2
Burst Tolerances for CO Rupture Disks

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

See **Table 1** for Oseco standard manufacturing design ranges.

- Reduced manufacturing ranges may be possible by 1/2%, 1/4% or 0%. Please consult the Oseco factory for all reduced manufacturing ranges.
- The burst tolerance is the maximum variation from the stamped burst pressure. See **Table 2** for Oseco burst tolerances.
- The COR is a CO rupture disk with a protective ring attached to the pressure side of the rupture disk. The RCOR is a CO rupture disk with protective rings attached to both the pressure and atmospheric sides of the disk. The rings protect the rupture disk from damage by a foreign substance on the seating surfaces of the rupture disk holder. A protective ring on the process side of the vacuum support is not required, as the vacuum support also protects the seal from damage.
- Minimum and maximum rupture pressures are listed for sizes and materials. Consult the Oseco factory for sizes and materials not listed. See **Table 3**.
- If COV disk is being used for safety relief valve isolation, the disk may require an extended height outlet holder to accommodate its opening. Please contact Oseco for information regarding heights of holders for SRV service.

TABLE 3
Minimum / Maximum Burst Pressure for CO Rupture Disks @ 72° F (PSIG)

Disk Size (Inches)		Type: CO, COV, COR, RCOR, RCOV						LCO	LVCO	LCVL	
		TOP SECTION CHOICE: 316, Nickel, Inconel, Monel						TOP SECTION CHOICE: 316, NICKEL, INCONEL OR MONEL		TOP SECTION	
		SEAL MATERIAL								316 SS	Nickel
		Fluoropolymer	Ni	Mon	Inconel	316	Al	Fluoropolymer Seal	Fluoropolymer Seal	Fluoropolymer Seal	Fluoropolymer Seal
1	MIN	44	180	220	285	400	50	87	87	300	230
	MAX	1000	2000	2000	2000	2000	1600	1000	300	1000	600
1.5	MIN	31	120	145	185	265	33	61	61	140	105
	MAX	700	1400	1400	1400	1400	1300	700	140	700	450
2	MIN	15	69	84	109	150	20	30	30	100	75
	MAX	555	1100	1100	1100	1100	960	555	100	555	395
3	MIN	11	52	62	79	115	15	21	21	65	45
	MAX	450	900	900	900	900	730	450	65	450	315
4	MIN	8	39	47	60	85	12	16	16	60	35
	MAX	415	830	830	830	830	630	415	60	415	300
6	MIN	6	29	35	45	64	9	12	12	75	45
	MAX	320	640	640	640	640	485	320	75	320	225
8	MIN	5	23	28	35	50	7	11	11	75	55
	MAX	295	590	590	590	590	420	295	75	295	200
10	MIN	4	18	22	28	38	5	9	9	60	35
	MAX	240	480	480	480	480	340	240	60	240	160
12	MIN	3	15	19	24	34	5	6	6	45	30
	MAX	200	400	400	400	400	290	200	45	200	140
14	MIN	3	14	17	22	29	4	6	6	40	30
	MAX	170	350	350	350	350	270	170	40	170	120
16	MIN	3	12	14	19	25	4	6	6	35	25
	MAX	150	300	300	300	300	250	150	35	150	105
18	MIN	3	10	13	17	23	4	6	6	35	35
	MAX	135	270	270	270	270	225	135	35	150	90
20	MIN	3	10	12	15	20	3	6	6	35	35
	MAX	120	240	240	240	240	200	120	35	150	80
24	MIN	3	40	55	45	45	3	6	6	35	35
	MAX	100	200	200	200	200	170	100	35	150	70
Maximum Temp (° F)		500	750	800	900	900	250	500	500	500	500

Note: The LCVL and LVCO rupture disks withstand full vacuum without any metal in contact with the process media

SENSORS

Sensors that can be used with the CO rupture disk are the SVT, AMS, and the CMS.

HOLDERS

Holders that can be used with the CO 30° angular seat rupture disks are the Union Holders, the RDI insert and the flanged bolted holders, RDH-1 through RDH-9. Holders that can be used with the (F)CO (flat seated CO) are the FRDI and FRDI(P).