

POSIPRO-S RUPTURE DISK

Oseco's POSIPRO-S Rupture Disk is an economical alternative for applications requiring extremely low positive pressure protection. The POSIPRO-S rupture disk is designed to provide protection for pressures starting as low as 1" of water column. Its primary use is in storage tanks with very low design pressures.



Oseco's POSIPRO-S rupture disk is ideal for vacuum and low-pressure protection.

Oseco's POSIPRO-S Rupture Disk

- The POSIPRO-S rupture disk is a dual-acting disk that can protect from extremely low overpressure conditions and also provides protection from vacuum.
- The POSIPRO-S consists of a fluoropolymer or 316 Stainless Steel girdle, a fluoropolymer seal, and a 316 Stainless Steel perforated top section.
- Operates to within 1" W.C. of minimum positive burst pressure (1-10" W.C.) / Operates up to 90% of minimum positive burst pressure (10-30" W.C.). Positive burst tolerance is 6" water column and is expressed as min/max on tag (i.e. 6" W.C. min/ 12" W.C. max). See "How the POSIPRO-S Works" on the next page.
- Operates up to 80% of stamped burst pressure in vacuum direction. Vacuum burst tolerance is ±5% above 40 psig and ±2 psig at or below 40 psig.
- If the POSIPRO-S is never subject to any vacuum pressure, a 316 Stainless Steel support ring can be provided in place of the perforated metal top section.
- POSIPRO-S is available in standard sanitary fitting sizes of 4, 6, 8, 10 and 12 inches.

TABLE 1
POSIPRO-S Temperature Limits

Girdle Material	Temperature Limit	
	Minimum	Maximum
Fluoropolymer	-25° F	150° F
316 SS	-25° F	400° F

TABLE 2
POSIPRO-S Ranges of Vacuum and Positive Pressure Relief

POSIPRO-S Standard Sanitary Fitting Size (Inches)	Vacuum Relief (Inches H ₂ O)		Positive Pressure Relief (PSIG@ 72° F)	
	FP* Girdle	316 Girdle	Minimum Burst Pressure	Maximum Burst Pressure (VRDS Holder)
	Range of Starting Relief Points Available	Range of Starting Relief Points Available		
4	1-30	6-30	11	100
6	1-30	6-30	8	75
8	1-30	6-30	6	50
10	1-20	6-30	5	40
12	-	6-30	4	30

Example: POSIPRO-S Required Relief Spread

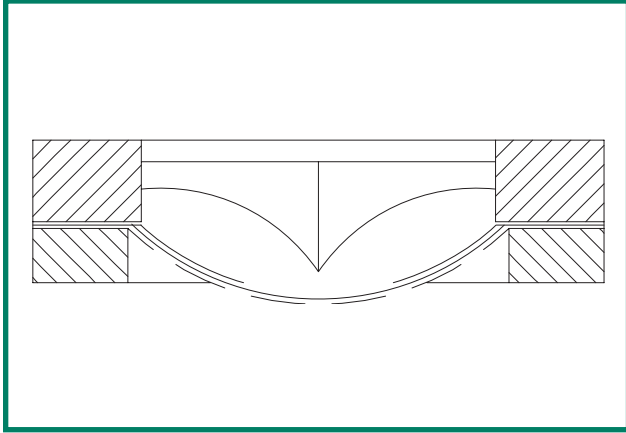
Operator requests 8" POSIPRO-S rupture disk with stainless steel girdle to relieve at 25" H₂O positive pressure. POSIPRO-S will puncture at above 25" H₂O and achieve maximum flow area at or below 31" H₂O positive pressure.

* FP indicates Virgin Fluoropolymer. PFA, FEP or PTFE may be product-specific and used at Oseco's discretion.

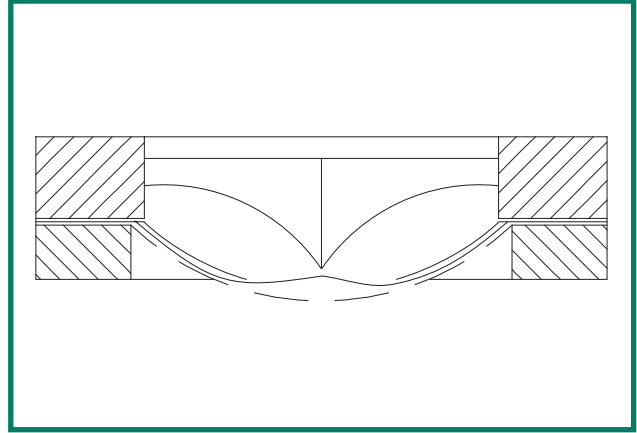
How the POSIPRO-S Works

POSIPRO-S positive burst pressures are stated as min/max pressures with six inches of water column between the minimum and the maximum burst pressure. The minimum is the lowest pressure differential at which the disk may begin to relieve. The maximum is the highest pressure differential required to achieve the full relief area.

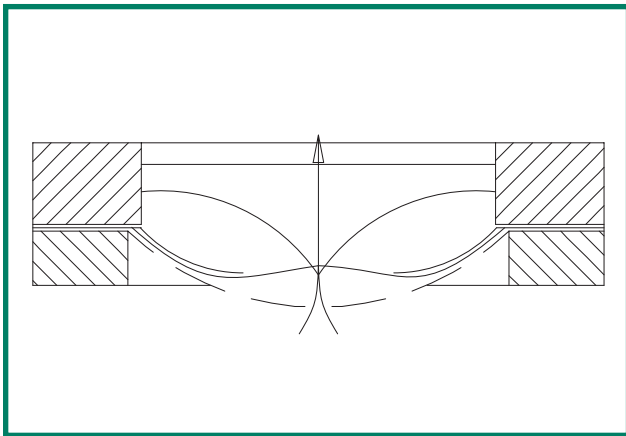
Assuming a POSIPRO-S disk had a positive burst pressure of 6" W.C. min/12" W.C. max, the disk would work as shown below.



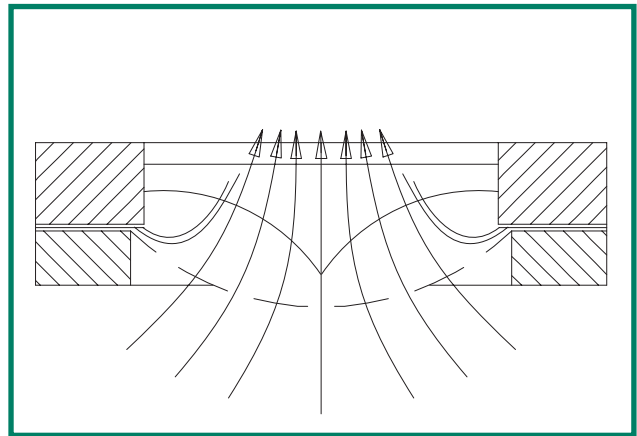
POSIPRO-S disk assembly with no positive pressure.



0" to 6" water column – The positive pressure acting on the fluoropolymer seal loads the girdle and deflects the seal toward the knife blades.



6" to 12" water column – The seal begins to puncture on the knife blades and relieves overpressure through the perforated top section.



12" water column – The seal continues to be opened by the knife blades until it reaches a maximum flow area.

SENSORS

The Oseco OSS is used in sanitary applications to provide an immediate signal when a POSIPRO-S rupture disk has burst to relieve a vacuum or overpressure condition.

HOLDERS

The POSIPRO-S is used in the type POSS sanitary rupture disk holder.