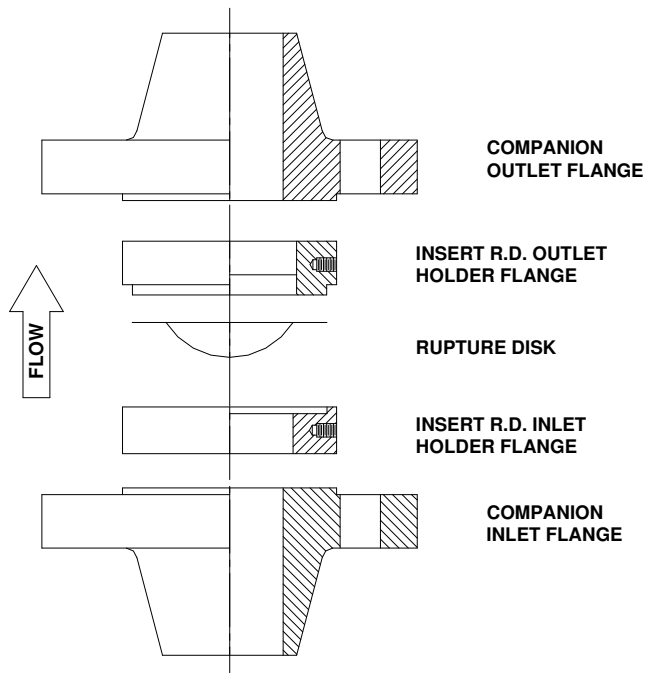


# Installation Instructions for PCR Rupture Disks in Flanged, Insert Assemblies

## TYPICAL PRDI INSTALLATION SHOWN



### CAUTION

All rupture disk installations should be located to allow full unrestricted discharge of a burst disk when over pressure of the system occurs. Never locate a rupture disk installation where the discharge from a burst disk is directly impacting personnel or equipment. Venting of a burst disk discharge must always be routed to a safe disposal area.

### IMPORTANT

A Precision Cut Reverse (PCR) rupture disk is a precision piece of equipment. Handle it with extreme care!! Avoid scratching, bending, denting or otherwise damaging the dome and/or flat seat areas of the disk. Handle the disk alone by grasping either the name tag or the flat outer sealing surfaces and avoid the dome areas as much as possible. **Never carry a PCR disk/holder by the rupture disk name tag alone as damage to the disk could occur if handled in this manner.**

## RUPTURE DISK HOLDER PREPARATION

### PRDH & PRDI Assemblies:

1) Loosen and remove flange bolting **only** after verifying that the system is **depressurized**. Always **purge** toxic and/or dangerous materials from any system that is to be opened to a safe disposal area.

### PRDH Assemblies Only:

- 1) If preassembly side bars and/ or pretorque cap screws are utilized, loosen and remove same, being careful not to all any part of the disk holder to slip or fall.
- 2) If jack screws have been installed with this disk holder, it will be necessary to utilize same to separate disk holder flanges to allow disk removal.
- 3) Once all holder restraints have been removed, carefully separate flanges and remove existing rupture disk. **Do not remove the locating pins in the inlet half of the holder!**
- 4) Thoroughly inspect and clean all seating surfaces within the holder. Do **not** scrape or scratch any seating surface including the raised nubbin area!! If wiping these surfaces with a "shop rag", moistened with a suitable solvent, does not remove surface residues, fine emery cloth or steel wool may be utilized. Care should be exercised **not** to exert sufficient pressure on the emery cloth or steel wool to "cut or groove" these sealing surfaces.

### PRDI Assemblies Only:

- 1) Remove the disk holder insert from between the companion piping flanges before loosening and removing preassembly side bars and/or pretorque cap screw.
- 2) After removal of all holder restraints, separate the holder inlet from the outlet and remove existing rupture disk. **Do not remove the locating pins in the inlet half of the holder!**
- 3) Thoroughly inspect and clean all seating surfaces within the holder. Do **not** scrape or scratch any seating surface including the raised nubbin area!! If wiping these surfaces with a "shop rag", moistened with a suitable solvent, does not remove surface residues, fine emery cloth or steel wool may be utilized. Care should be exercised **not** to exert sufficient pressure on the emery cloth or steel wool to "cut or groove" these sealing surfaces.

# Installation Instructions for PCR Rupture Disks in Flanged, Insert Assemblies

## RUPTURE DISK INSTALLATION

### PRDH Assemblies Only:

- 1) Place the rupture disk on the inlet flange of the rupture disk holder in a position that will allow system pressure to be exerted on the convex (dome) side of the rupture disk. This will allow the concave side of the rupture disk to extend down into the inlet flange half of the rupture disk holder. Be sure that the disk aligns properly with the locating pins.
- 2) Carefully position the outlet flange half of the rupture disk holder such that the alignment pins engage the locating holes and rests on the flat surface of the rupture disk. If jack screws are being utilized, these must be "backed off" until the rupture disk holder flanges seat against the rupture disk. During this step, **do not** allow the rupture disk to slip from its position on the inlet flange. Damage will occur to the rupture disk if the outlet half of the holder is seated on any surface other than the flat seating area of this disk.
- 3) If preassembly side bars and/or pretorque cap screws are utilized, install these items at this point.
- 4) Reinstall studs, nuts and suitable gasketing. Tighten nuts uniformly to maintain flange surfaces parallel to one another. Always keep studs and nuts lightly lubricated to maintain a "free running" condition. The torque values listed in the table are suitable for many of the gasket and flange bolting materials currently in use. Please consult the factory when gasket sealing or a leak free rupture disk holder installation cannot be achieved or maintained. Do **not use excessive torque** on flange bolting as this may cause damage to the "bite" type seal in the holder as well as the rupture disk itself.

### PRDI Assemblies Only:

- 1) Place the rupture disk on the inlet half of the rupture disk holder in a position that will allow system pressure to be exerted on the convex (dome) side of the rupture disk. This allows the concave side of the rupture disk to extend into the inlet half of the rupture disk holder and away from the outlet half. Be sure the disk properly aligns on the locating pins.
- 2) Carefully position the outlet half of the rupture disk holder and lower same until seated on the flat surface of the rupture disk.
- 3) Install side bars; however, cap screws should only be snug, **not wrench tight**.
- 4) Position PRDI/disk assembly within the bolt circle of the

companion piping flanges then reinstall studs, nuts and suitable gasketing. Tighten nuts uniformly to maintain companion flange surfaces parallel to one another. Always keep studs and nuts lightly lubricated to maintain a "free running" condition. The torque values listed in the table are suitable for many of the gasket and flange bolting materials currently in use. Please consult the factory when gasket sealing or a leak free rupture disk holder installation cannot be achieved or maintained. Do **not use excessive torque** on flange bolting as this may cause damage to the "bite" type seal in the holder as well as the rupture disk itself.

### HOLDER ASSEMBLIES OTHER THAN OSECO'S

When installing OSECO'S PCR rupture disk in some other firms holder, please follow the procedure outlined above with regard to disk placement, care in handling the disk, etc. However, please consult the original installation instructions received with your holder for care, cleaning and inspection of your holder prior to returning it to service. This same document will also provide whatever special bolt procedures your holder may require.

### COMPANION FLANGE TORQUE REQUIREMENTS FOR PCR FAMILY RUPTURE DISKS

Companion Flange Torque (ft-lbs)				
Size (inches)	Pressure Rating (ANSI)			
	150	300	600	900
1	20	25	25	35
1.5	32	47	47	71
2	49	25	25	42
3	77	46	46	61
4	52	62	81	104
6	98	65	97	109
8	131	102	145	166
10	124	106	155	152
12	132	155		