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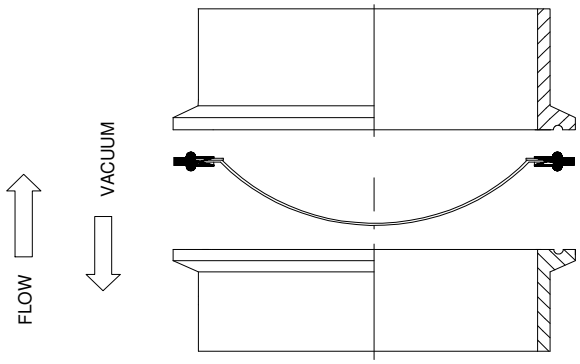
Installation Instructions for SPROS Rupture Disks in Sanitary Tubing Lines

TYPICAL SPROS INSTALLATION SHOWN



Electrical Data	
Max Current	150 mA
Temperature Range	-45° to 425°F
Max Pre-burst Resistance	20 Ohms

This sensor may be used at any voltage provided the maximum current requirements are not exceeded.

Materials	
Gasket	Asbestos Free Synthetic
Membrane	Peek
Circuit Track	Silver
Cable	24 AWG, 2 Cond., Teflon Insulated, Shielded, 18 Inches Standard

This sensor may be used at any voltage provided maximum current requirements are not exceeded.

CAUTION

All rupture disk installations should be located to allow full, unrestricted discharge of a burst disk when overpressure 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 rupture disk discharge must always be routed to a safe disposal area.

IMPORTANT

A SPROS rupture disk/sensor assembly is a precision piece of equipment. Handle it with extreme care!! Avoid scratching, bending, denting or other wise damaging the dome and/or flat seat areas of the disk. Handle the disk alone by grasping either the nametag or the outer sealing gasket and avoid the dome areas as much as possible. **Never carry a SPROS disk by the rupture disk name tag alone as damage to the disk could occur if handled in this manner.**

NEW RUPTURE DISK INSTALLATIONS

Sanitary Joint Separation:

1) Loosen tubing joint sanitary clamp bolting at the tubing joint where the rupture disk is to be installed 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. Disk installation will require a space greater than the overall height of the SPROS to insert the disk at any tubing system joint. Remove the sanitary joint clamp before attempting to provide the space required for installation.

2) Since this rupture disk has its own gasket mating the existing joint configuration, remove and discard the existing joint gasket once sufficient space is provided for the disk installation.

3) Thoroughly inspect and clean all seating surfaces within the opened tubing joint. Do **not** scrape or scratch any seating surface! If wiping these surfaces with a "shop rag" moistened with a suitable solvent does not remove surface residues, special cleaning procedures beyond the scope of these instructions are required. Contact the appropriate end user personnel for instructions.

4) Verify that the system pressure will be exerted on the SPROS disk dome (convex side) and install disk such that the dome faces the system pressure source. Verify that the gasket seats in the gasket grooves shown in the tubing joint flange detail.

5) Once the joint spacing created in 1) above has been closed, reinstall the tubing joint sanitary clamp. Torque the sanitary clamp bolting to the specifications of Table 1 below.

6) Bend the nametag tab at the appropriate reduced section to align name tag with tubing run. Bend must be such that the flow arrow is pointing in the correct venting direction and the name tag is readable.

7) After installation, connect the sensor to a compatible, quick acting, latching alarm system. The sensor is a

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normally closed device. The alarm system should be wired to indicate a burst disk when the sensor creates an open circuit.

8) After the sensor is connected to the alarm system, verify that the system is working properly by disconnecting the sensor cable, simulating an open circuit alarm condition. Reconnect cable after test. Periodic sensor system testing is recommended. When using an OSECO alarm monitor, see OSECO's recommended "BDA System Verification Procedure".

REPLACEMENT OF BURST DISKS:

Sanitary Joint Separation:

1) Loosen tubing joint sanitary clamp bolting at the tubing joint where the rupture disk is located 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. Disk removal will require a space greater than the nominal disk size at the tubing system joint. Remove the sanitary joint clamp before attempting to provide the space required for removal of the burst disk assembly.

2) Once sufficient space has been provide for removal of the burst disk, carefully extract the burst disk assembly. The edges opening the disk are sharp. Avoid these edges when handling the burst disk assembly!

3) Thoroughly inspect and clean all seating surfaces within the opened tubing joint. Do **not** scrape or scratch any seating surface! If wiping these surfaces with a "shop rag" moistened with a suitable solvent does not remove surface residues, special cleaning procedures beyond the scope of these instructions are required. Contact the appropriate end user personnel for instructions.

4) Verify that the system pressure will be exerted on the SPROS disk dome (convex side) and install disk such that the dome faces the system pressure source. Verify that the gasket seats in the gasket grooves shown in the tubing joint flange detail.

5) Once the joint spacing created in 1) above has been closed, reinstall the tubing joint sanitary clamp. Torque the sanitary clamp bolting to the specifications of Table 1 below.

6) Bend the nametag tab at the appropriate reduced section to align nametag with tubing run. Bend must be such that the flow arrow is pointing in the correct venting direction and the nametag is readable.

7) After installation, connect the sensor to a compatible, quick acting, latching alarm system. The sensor is a normally closed device. The alarm system should be wired to indicate a burst disk when the sensor creates an open circuit.

8) After the sensor is connected to the alarm system, verify that the system is working properly by disconnecting the sensor cable, simulating an open circuit alarm condition. Reconnect cable after test. Periodic sensor system testing is recommended. When using an OSECO alarm monitor, see OSECO's recommended "BDA System Verification Procedure".

HOLDER ASSEMBLIES OTHER THAN OSECO's

When Installing OSECO's SPROS rupture disk in a holder not manufactured by OSECO, 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 closing procedures your holder may require. Please note that the non-OSECO holder must utilize the same gasket configuration or sealing will not occur.

Sanitary Clamp Bolt Torque Requirements for PROS Rupture Disks

Clamp Size (inches)	Torque (in-lbs)	Disk size (inches)
1	40	1
1.5	40	1.5
2	40	2
3	40	3
4	40	4

Torque values are based on nut and bolt being lightly lubricated and maintained in a “free-running” condition.

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