



# INSTALLATION INSTRUCTIONS

## RDI Rupture Disk Indicator

### SERVICE LIMITS

1. The RDI assembly can be used on liquid, gas or two phase flow.
2. Minimum Activation Pressure:
  - 1" to 2" 5 psig
  - 3" to 4" 3 psig
  - 6" and Up 1 psig
3. Operating Temperature Range: – 40°F (-40°C) to +392°F (200°C).
4. Suitable for intrinsically safe power levels. Maximum current 150mA, maximum voltage 24 Volts AC/DC.
5. Electrical resistance 20Ω or less.
6. Any and all local, national and plant installation codes should be observed, at the sole responsibility of the user.

**WARNING:** Use RDI assembly with intrinsically safe electrical device if used on any hazardous location. Consult factory on services with fluids that are electrically conductive.

### SELECT PROPER LOCATION

1. **ALWAYS VENT THE OUTLET TO A SAFE AREA**, away from personnel. If the process fluid is toxic or hazardous connect the outlet side of the rupture disk assembly to a containment tank.
2. Consideration should be given to prevent build-up of rain water, snow, animal nesting or other debris that may build up in the discharge piping and disturb the normal operation of the RDI indicator.
3. If the RDI assembly is to be installed in a horizontal piping system **DO NOT** orient the RDI cable towards the bottom. The recommended orientation is towards the top or either side.

### INSTALLATION INSTRUCTIONS

1. The RDI assembly is installed on the vent side of the rupture disk assembly normally between the disk holder and the companion flanges. The assembly is compatible with all ZOOK Graphite and Metal Rupture Disks and holders, provided the burst pressure is at least equal to the minimum activation pressure of the RDI detector.
2. Clean the clamping surfaces of the companion flanges and if required the disk holder thoroughly.
3. For flat composite disks (ARD series) a spacer is recommended to allow for flexure of the disk. A spacer should also be used if a domed disk clashes with the RDI membrane.
4. The RDI assembly is NOT 'Flow Direction' sensitive. However, it is recommended that the "shiny" side of the RDI is facing towards the rupture disk. Place the RDI assembly between the companion flange and disk holder making sure it is centered and concentric with each other.
5. No additional gasket is required on the vent side of the rupture disk assembly. Process side gasket is required.
6. Mark the installation date on the RDI tag.
7. Bolting should follow the instructions for the companion disk. For stand-alone installations follow the torque procedure on the next page.
8. Using approved Electrical Code Procedures connect the RDI to the burst detection circuit via the attached cable.

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# INSTALLATION INSTRUCTIONS

## RDI Rupture Disk Indicator

### LEAK DETECTION (LD) OPTION INSTALLATION

1. The LD is installed immediately upstream of the RDI indicator.
2. Align outside diameter of LD with outside diameter of the RDI.
3. The LD may be held in place by using small piece of Scotch® tape over the outside diameter on both sides of the RDI. Locate tape 90° from both sides of cable exit.

**Tape must not extend more than half way across gasket surface.**

After each leak detection a replacement LD and RDI must be installed. Contact ZOOK for replacement parts.

### TORQUING PROCEDURE

1. Finger tighten all of the nuts.
2. Using a torque wrench, cross-tighten each bolt to ¼ of the desired final torque (see table 1 below) until every bolt has been tightened.
3. Repeat step 2 to ½, ¾, and then to the full desired final torque.

**NOTE: OVER TORQUING CAN DAMAGE THE RDI INDICATOR.**

Table 1 – Recommended Torque Values					
Size	ANSI Flange Class	Torque (ft. lbs.)	Size	ANSI Flange Class	Torque (ft. lbs.)
1"	150	10	10"	150	55
1 ½"	150	20	12"	150	70
2"	150	35	14"	150	100
3"	150	45	16"	150	80
4"	150	35	18"	150	110
6"	150	60	20"	150	100
8"	150	70	24"	150	150
<b>TORQUE VALUES BASED ON THE THREADS BEING LIGHTLY LUBRICATED AND FREE RUNNING</b>					

**Warning: Field modification and material substitution will void the warranty of this product.**

### WARRANTY

ZOOK warrants its products against Defective workmanship and materials. This Warranty is limited to the replacement without charge of the defective product only and does not cover any other direct or indirect costs which may be attributed to the defect, provided It is properly installed and used within the scope for which it is intended.

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