DIAPHRAGM RUPTURE DETECTION SYSTEM

GENERAL INFORMATION
Milton Roy's diaphragm liquid ends are, by design, leakproof and durable. In some applications, however, added assurance is desired to protect the pump from hostile chemicals, or protect the process from contamination by hydraulic fluids. For these situations, Milton Roy has developed a highly reliable diaphragm rupture detection system.

This system is available for metallic liquid end mRoys, maxRoys, and Centrac or Milroyal pumps with HPD liquid ends.

An alternate design utilizing conductivity sensing in an intermediate chamber between two diaphragms is also available for a number of liquid ends.

OPERATION
The system consists of two separate diaphragms, a hollow intermediate ring, and a pressure switch and/or gauge. During normal operation, the two diaphragms are pushed tightly together and are separated only around their outside edge by the intermediate ring. Because there is no fluid and very little air between the two diaphragms, the system does not experience pressure from the process when both diaphragms are intact. The rupture detection system senses process pressure only when one of the diaphragms ruptures.

Once a rupture occurs, a pressure gauge provides visual indication, or an optional pressure switch provides contact closure for remote indication.
SPECIFICATIONS

Maximum pressure ratings
- mRoy A: 925 psig
- mRoy B: 1000 psig
- maxRoy: 150 psig
- Centrac B HPD: 200 psig
- Milroyal D, B, & C HPD: 200 psig

mRoy A & B Materials
- Diaphragms: PTFE
- Sensing Ring/Tubing: Steel /304 SS or 316SS/316SS

Flow Rate
- Derate flow by 5% on all pumps.

maxRoy, Centrac B, & Milroyal Materials
- Diaphragms: PTFE (front); PTFE/elastomer (rear)
- Sensing ring & tubing: 316 SS

Availability (metallic liquid ends only)
- mRoy: All models except 1% plunger at 23, 73, and 117 spm, and mRoy B 1%2" plunger
- maxRoy: All models
- Centrac B: HPD liquid ends
- Milroyal O, B, & C: HI'D Liquid Ends

Accessories
- Pressure Gauge: 316 SS liquid filled (standard)
- Pressure Switch w/Gauge: NEMA 4 or explosion proof (optional)

All information contained herein subject to change without notice.

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