



DIAPHRAGM RUPTURE DETECTION SYSTEM



mRoy A with diaphragm rupture detection system including pressure switch.

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.

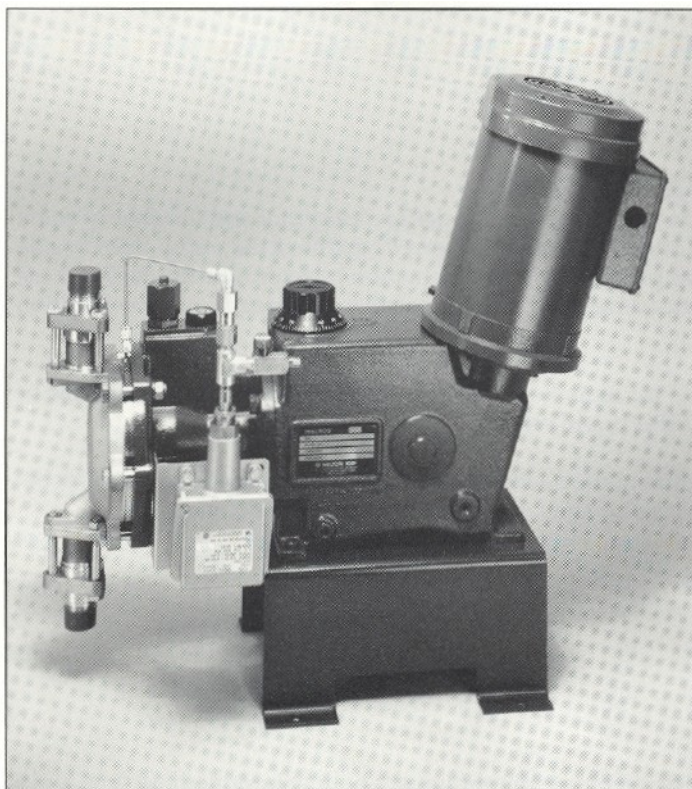
OPERATION

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 rupture.

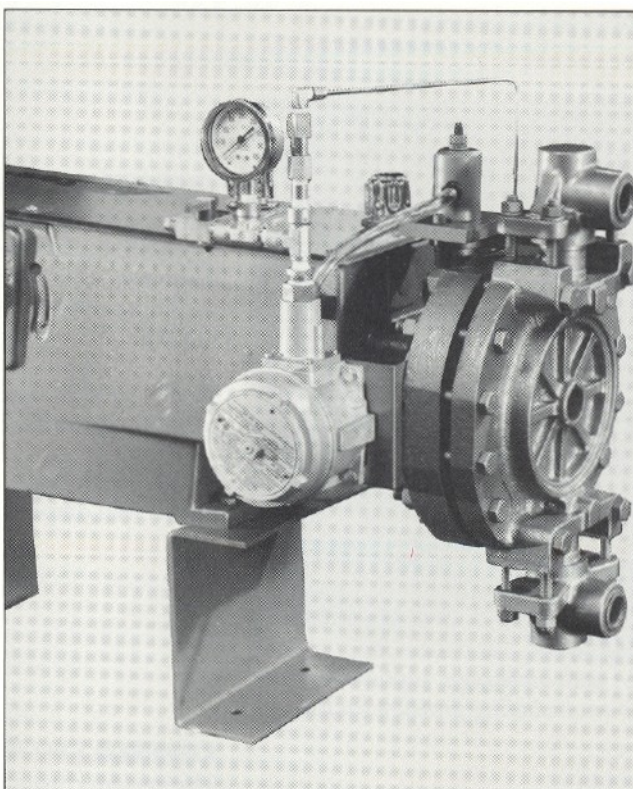
Once a rupture occurs, a pressure gauge provides visual indication, or an optional pressure switch provides contact closure for remote indication.

The system consists of two diaphragms separated by a very thin metal ring with a pressure sensing cavity around the inside perimeter.





Milroyal B HPD liquid end with diaphragm rupture detection system.



maxRoy B with diaphragm rupture detection system.

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 6-plunger at 23, 73, and 117 spm, and mRoy B I½" plunger
maxRoy	All models
Centrac B	HPD liquid ends
Milroyal O, B, & C	HPD 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.