



Roller Type Wear Detector

The Exline Roller Type Wear Detector may be used to monitor horizontal or vertical movement of reciprocating or rotating parts.

The Detector has a replaceable stainless steel Vent Valve with a Viton™ seal rated at 375°F and a 1/4" NPT male connection threaded to accept a pneumatic control system air line.

Principal application is to signal compressor rod drop. The Roller Type Wear Detector may be installed directly below the compressor rod, where rod travel is horizontal, or on the thrust side where the rod travels vertically. If wear occurs on the piston, piston riders, crosshead or cylinders, the rod contacts the Detector's knurled wheel. Rod motion rotates the wheel, which in turn opens the Vent Valve connected to the pneumatic control system. A spring-loaded pin locks the rotated wheel into the "shutdown" position. The resulting pressure drop may be used to shut down the compressor automatically.

The Roller Type Wear Detector can be used in applications where low ambient temperatures, certain synthetic lubricants and incompatible rod coatings have ruled out the installation of heat-sensitive friction-type protective devices.

- Total Reliability
- No Maintenance
- No Calibration
- Temperature Independent
- Reusable
- Easy To Reset In Place

How to Order

The Roller Type Wear Detector comes in one size only and can be used with rods of any diameter. Its aluminum body is drilled and tapped so that the Vent Valve and spring-loaded plunger can be mounted on either side of the device.

Order by part number

Roller Type Wear Detector Assy.	310550
Vented Roller Type Wear Detector Assy.	320550
Vent Valve Replacement	300101
Locking Pin/Spring Plunger	030301
Vent Adapter (for vented RTWD)	030302

Details of Installation

The packing case nuts can be used as mounting points. Fabricate a metal bracket to support the Detector directly under, or on the thrust side of, the compressor rod. Drill and tap two holes in the bracket to attach the Detector.

To determine the appropriate clearance between Detector wheel and rod, consider the thickness of the piston rider

band material, the location of the device in relation to the crosshead pin and the desired sensitivity. Insert a shim stock of the appropriate thickness between the rod and wheel, hold the device firmly against shim stock and bracket as the bolts are tightened. Remove the shim and pipe the Vent Valve to the control header.

No regular maintenance or calibration is required unless new compressor components are installed or packing is replaced. The Vent Valve can be replaced and the device reset to the marked "run" position without recalibration, but it is advisable to confirm the preset clearance after new parts are installed.

Setting Instructions

1. Determine which side will be accessible after installation.
2. Install bleed valve, P/N 300101 into body of RTWD.
3. Install spring plunger / locking pin, P/N 030301 into body of RTWD:
 - a. Screw in until the ball end of the plunger sets into the stop hole of the wheel (1/8" hole drilled in wheel). The plunger will set approximately the depth of the radius.
 - b. Snug the lock nut and pull plunger outward.
4. Turn wheel until punch holes align. This is the run position.
5. Turn wheel, making sure the plunger will release and hold in the shutdown position after dropping into the 1/8" hole. There will be a strong drag on the wheel as it is turned. It is important not to over tighten the spring plunger so that the wheel can not move at all and to be sure to not secure the spring plunger too loosely so that the wheel will move too easily.
6. Install complete Roller Type Wear Detector assembly, set proper clearance. Check for shut-down by simply turning the wheel. Care should be taken during installation to avoid damage to the plunger stem.
 - a. Suggested clearance for worn rings / riders should be set at approximately .005" to .010".
 - b. Suggested clearance for new rings / riders should be set at approximately .010" to .015".

