



Demountable Rotary Valve

Rotor Detection System (RDS)

Demountable Rotary Valves with Rotor Detection System

Overview

The use of plastic rotors in GEA Nu-Con demountable rotary valves has proved to be a sound solution for eliminating rotary valve scraping, which is a possibility with full stainless steel construction.

However, plastic rotors are not suitable for all duties. For example, abrasive or high temperature products require stainless steel rotors to be used.

For those applications that require abrasive or high temperatures (and with close tolerances), GEA Nu-Con has developed a special monitoring device to manage the potential risk of rotor scraping.

The Rotor Detection System has specifically been designed also to meet the requirements of CIP (Clean In Place) with a setting allowance for dry out of the equipment, the re-designed RDS unit is more robust and has an ATEX compliance option.

The complete Rotor Detection System assembly uses longer life bearings in the Rotary Valve unit, and incorporates a solid stainless steel rotor that enables the rotor to be serviced. Retro fitting existing Generation 1 and 2 RDS and or Rotary Valves without RDS is an available option.

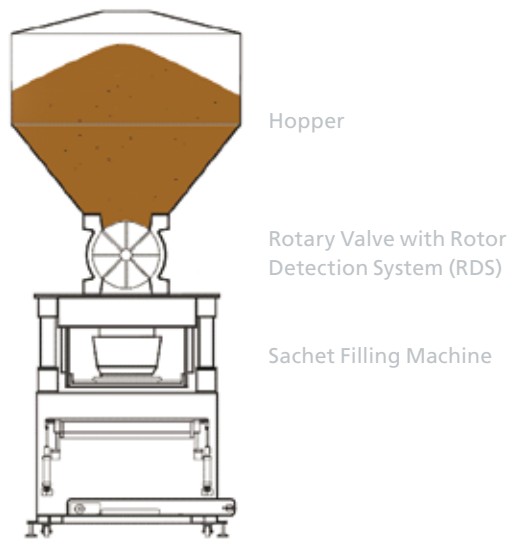
When fitted, this device continuously monitors the electrical isolation between the rotor and the valve housing, giving an immediate warning of any rotor contact, or even the presence of a metal shaving lodging between rotor and body.

Generation 3 Rotor Detection System has been specifically designed to provide a more flexible interface, to provide maintenance management tools and include seal monitoring. This ensures that the plant operator can monitor the condition of the rotary valves in the plant much more effectively than ever before.



Control Module

- Controls RDS System
- 24V DC, DIN rail mounted
- Includes ATEX compliant barrier (option)
- Modbus / Ethernet interface
- LED status indication
- Separate contact / system fault outputs
- CIP mode



Rotary valve with RDS used for application where the risk of rotor scraping needs to be minimised



Features

- Detection Range 0-120 ohms ATEX rated (with compliant barrier)
- CIP compatible
- Circuit monitoring Offline testing
- Data recording to preserve history
- Can be used in Direct Drive or Chain Drive systems
- Modbus RS485 Networkable
- Modbus TCP/IP Networkable - NEW for GEN3
- Speed Output/Motion Detection - NEW for GEN3
- Mounting distance up to 200M
- Windows configurator Interface RS485 and Micro USB - NEW for GEN3
- All settings can be downloaded
- Maintenance Management System - NEW for GEN3
- Seal Controller - NEW for GEN3
- Instant output signal from any metal contact.
- Fail-safe monitoring with fault output signal
- Confirms valve rotor is running free after reassembly and commissioning online
- Adjustable sensitivity via control module
- 24V DC
- Dual setpoint
- Rate Output - NEW for GEN3

Options

- ATEX/NEMA enclosure complete with isolator - NEW for GEN3
- Seal pressure control - NEW for GEN3
- Seal wearing alarm - NEW for GEN3
- Seal worn out alarm - NEW for GEN3
- Drive start control - NEW for GEN3
- Rotor Detection System (R.D.S) option is available on all GEA Nu-Con demountable rotary valves - including the Easy Slide Rotor support option
- ATEX compliant barrier

Applications

- Monitoring rotor to housing contact.
- Use for warning or process shutdown when rotor contacts the valve body
- Use with close tolerance stainless steel rotor applications
- Use in high temperatures applications, to detect any rotor contact with the valve housing
- Use with abrasive products
- Use in the feeding to filling lines
- Use at the bottom of cyclones
- Use on convey through valves where plastic rotors are not able to be used

Compliance Options

- ATEX
- Explosive Protective System - EN 15839
- USDA



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