# RAPID RESPONSE. PRECISE CONTROL. COMPRESSOR PROTECTION.


VRG Controls' next-generation anti-surge valve technology combines ultra-fast response, precise valve positioning, and zero steady-state fugitive emissions. Using the Red Circle Valve Controller (RCVC), the dual-mode system delivers rapid stroking during surge events while maintaining stable, accurate control during recycling and startup, without the performance compromises of traditional single-mode ASV systems.

**PATENT: www.vrgcontrols.com/our-patents**

## VRG CONTROLS RED CIRCLE VALVE CONTROLLERS OFFER:

- Anti-surge protection with highly accurate control
- Minimal ASV valve overshoot
- Extremely fast response - milliseconds
- Zero steady-state emissions control instrumentation
- Potential cost savings, due to less energy use
- Less system maintenance and lower down time

EXPLORE MORE ABOUT
ASV ANTI-SURGE VALVES

# MULTIPLE VALVE PRODUCTS...

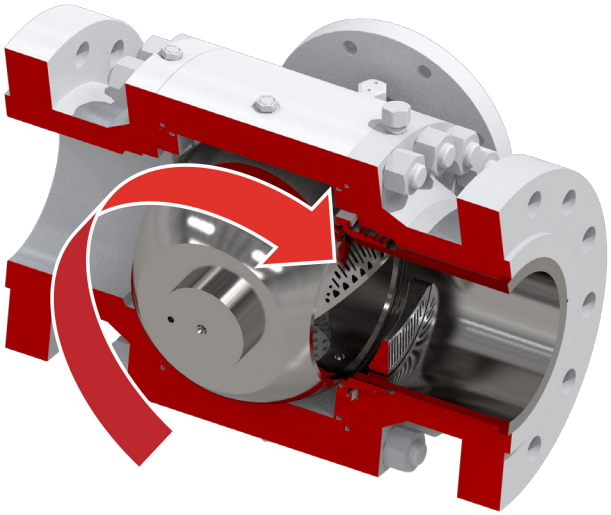
## PIPELINE ROTARY CONTROL VALVE

### SPECIFICATIONS:

| | |
|---|---|
| **Control Valve(s):** | PRCV Pipeline Rotary Control Valve (Surge Spec.) |
| **Actuator Type:** | RHPA-SR Rotary High-Pressure Actuator – Spring Return (Surge Spec.) |
| **Pressure Ratings:** | ANSI Class 150 – 2500 |
| **Sizes:** | 4 in to 16 in (Typical) |
| **Trims:** | High Performance Trims Available for Extended Rangeability and Noise Attenuation |
| **End Connections:** | RFFE*, RTJ, Weld End |
| **Temperature Range:** | -20°F to +350°F (-29°C to 177°C) standard |
| **Performance:** | Meets or Exceeds Current Compressor Manufactures Requirements |

### INDUSTRY STANDARDS AVAILABLE:

- ASME B16.34 Compliant
- PED 27/23/EC EU Pressure Equipment Directive – Limitations Apply
- ATEX Dir. 94/9/EC Equipment for use in Explosive Atmospheres
- CRN Canadian Registration Number - Optional
- NACE MR0175 Petroleum and Natural Gas Industries



**PRCV ROTARY CONTROL**
**CUTAWAY VIEW**

# FOR ANY ANTI-SURGE SOLUTION.

## AXIAL FLOW CONTROL VALVE

### SPECIFICATIONS:

| | |
|---|---|
| **Control Valve(s):** | Red Arrow Axial Flow Control Valve (Surge Spec.) |
| **Actuator Type:** | LHPA-SR Linear High-Pressure Actuator – Spring Return (Surge Spec.) |
| **Pressure Ratings:** | ANSI Class 150 – 1500 |
| **Sizes:** | 6 in to 24 in (Typical) |
| **Trims:** | High Performance Trims Available for Extended Rangeability and Noise Attenuation |
| **End Connections:** | RFFE* & RTJ |
| **Temperature Range:** | -20°F to +350°F (-29°C to 177°C) standard |
| **Performance:** | Meets or Exceeds Current Compressor Manufactures Requirements |

### INDUSTRY STANDARDS AVAILABLE:

- ASME B16.34 Compliant
- PED 27/23/EC EU Pressure Equipment Directive – Limitations Apply
- ATEX Dir. 94/9/EC Equipment for use in Explosive Atmospheres
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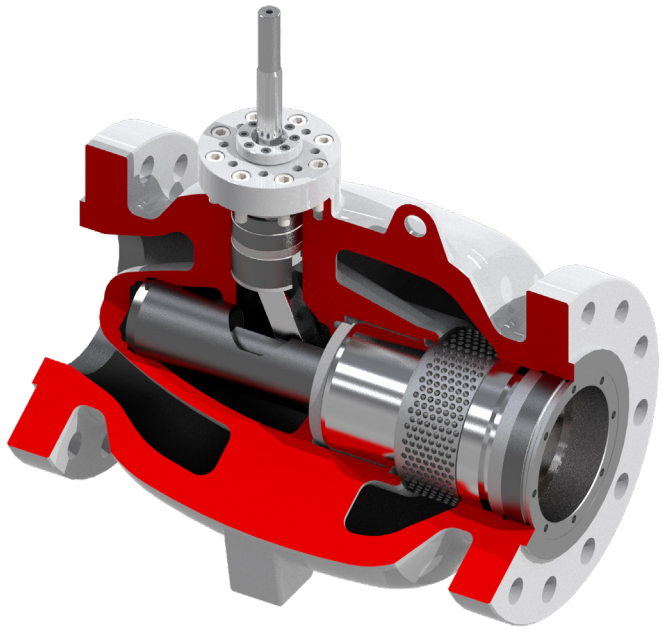
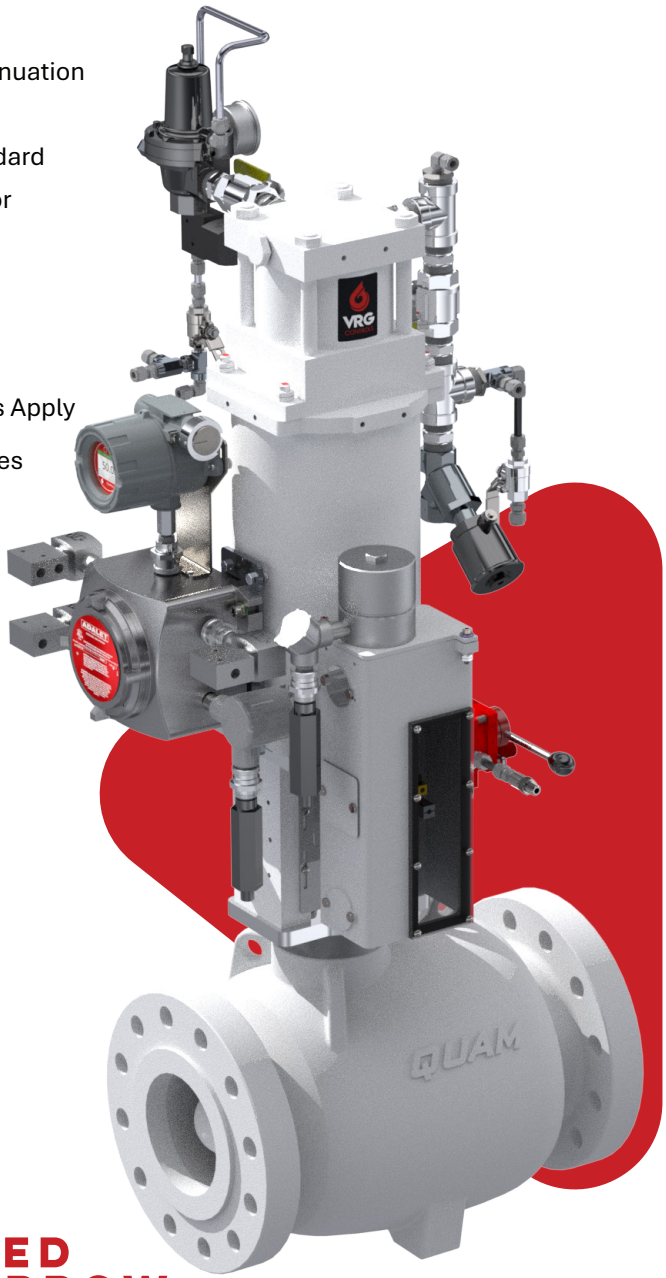


**INTERNAL CRANK-ARM MECHANISM**
**AXIAL FLOW CUTAWAY VIEW**



## FASTER RESPONSE. GREATER EFFICIENCY. REDUCED MAINTENANCE.

VRG Controls' next-generation anti-surge valve technology combines rapid response, precise positioning, and improved system efficiency. The RCVC-controlled dual-mode system can open the valve in milliseconds while maintaining stable control with minimal overshoot during recycle and startup. By using higher-pressure natural gas instead of compressed air, the system can reduce actuator size, minimize seal failures, eliminate air compressor requirements, lower energy use, and reduce maintenance costs. If preferred, VRG Controls Anti-Surge Valves may be operated using compressed air.

**FIGURE 1 –**

### ACCEPTABLE POSITIONING AT MAXIMUM RECOVERY TIME

**VRG Controls ASV Control System Provides Reduced "Overshoot Triangle"**

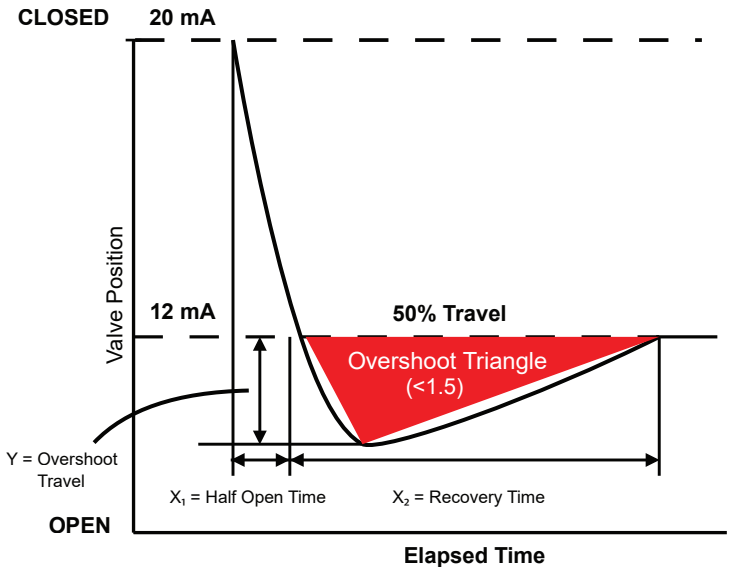
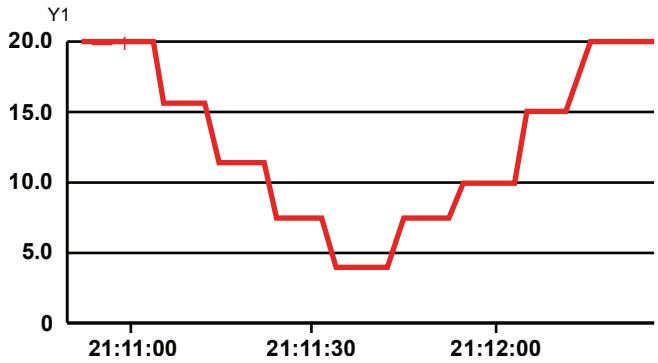



**FIGURE 2 –**

### TEST RESULTS – 8.0 IN ASV

**VRG Controls ASV Control System Ensures Accurate Positioning**

RCVC 3000 Diagnostic Test
Open Deadband: 0.5%
Close Deadband: 0.5%
Pulse Zone: 2.0%




**LEGEND:** 1: Valve Feedback(mA) 4.00 – 20.00 mA

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