

RED HORSE

Electro Hydraulic Control System

Precise valve positioning for natural gas and liquid applications

Modular hydraulic power for valve control

The Red Horse System combines a compact electro-hydraulic power unit with proven valve controllers, hydraulic actuators and position feedback devices. Its closed hydraulic system provides emissions-free valve positioning for throttling and on-off service.

24 VDC

Standard electrical power

1500 psig

Maximum hydraulic output pressure



Shown with a VRG rotary control valve and hydraulic actuator package

Built for new and existing installations

Configure Red Horse around the valve, actuator and process requirements.



Rotary vane actuated valve
with Red Horse retrofit

Modular configuration

Accepts VRG electronic valve controllers, hydraulic actuators and high-performance feedback devices to form a complete electro-hydraulic valve positioning system.

Simple electrical integration

Standard 24 VDC power integrates with existing electrical infrastructure. Optional power configurations are available for specific installation needs.

Closed loop hydraulics

Eliminates the need for a reservoir in most applications, reducing hydraulic fluid volume and potential fluid loss or contamination.

Application flexibility

Supports rotary and linear hydraulic actuators, analog throttling and discrete on-off control. Configure stroke, controls and fail-safe function for the application.

Proven control components

Uses standard VRG control devices for component readiness and operator familiarity. Contact VRG for retrofit evaluation and actuator compatibility.

Failure behavior

Standard control logic is Lock Last on power loss. Fail Open or Fail Closed operation requires the appropriate solenoid and actuator or stored-energy configuration.

SYSTEM INTEGRATION

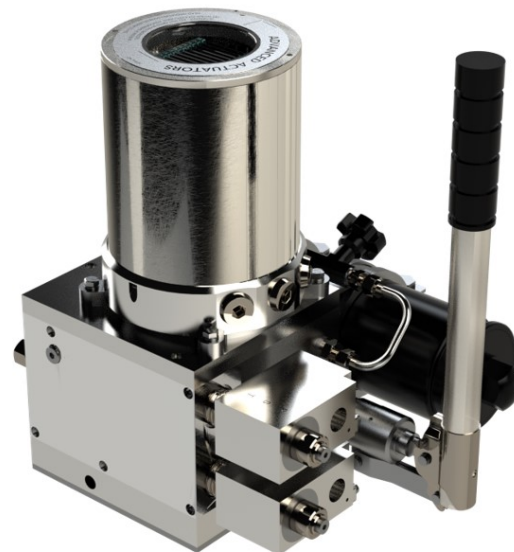
Compact power with precise control

C Pump electro-hydraulic power unit

316L stainless steel construction, a smart brushless motor, 4-20 mA + HART 7 and dynamic flow and pressure control in a compact modular package.

Environmental and hazardous area options

IP66 / NEMA 4X; explosion-proof Ex d configurations. ATEX / IECEx / ECAS / INMETRO options. Confirm approvals for the selected configuration.



Module shown with manual hand pump option

Command	4-20 mA analog positioning; 24 VDC discrete open/close and override
Position feedback	4-20 mA analog; integrated sensor options
Power	24 VDC standard; 120 VAC optional ¹
Steady state draw	Less than 1 W
Hydraulic pressure	1500 psig maximum output
C Pump flow	2.0 L/min (0.53 US gpm); pumps may be stacked to increase flow
Hydraulic fluids	Synthetic and mineral; low-temperature and fire-resistant options
Ambient temperature	-40°F to 176°F (-40°C to 80°C) ²
Housing	316L stainless steel
Approximate dimensions	9.8 × 5.0 × 10.6 in (see note 3)
Approximate weight	70 lb (32 kg) ³
Connections	Electrical: 3 × 0.500 FNPT; hydraulic: 2 × 0.500 FNPT

¹ Alternate electrical configurations are available by special order. ² Confirm hydraulic fluid operating and storage temperature limits. ³ Nominal dimensions and weight vary with options and accessories.

Configure the complete system

Select position feedback, control and override options for your application.

Rover Rotary Transmitter

Contactless rotary position feedback and mechanical limit switches in a rugged stainless steel, vibration-resistant package. High-speed, high-resolution feedback is paired with a high-visibility travel indicator and digital position display.

Balluff BTL7 Linear Transmitter

Non-contact magnetostrictive sensing provides precise, continuous linear actuator or valve position measurement. High accuracy and wear-free operation support reliable feedback in demanding industrial applications.

RCVC3000 Red Circle Valve Controller

Provides the central control capability while Red Horse supplies the hydraulic motive force. Analog or discrete inputs support accurate valve positioning, programmable controls, diagnostics and flexible integration.

Jockey HyControl Valve Controller

Provides precise hydraulic valve positioning from analog or discrete inputs. Embeds within the Red Horse System or Rover Rotary Transmitter to simplify the controls configuration and reduce external components.

Explosion Proof Solenoid Option

Provides a defined fail position on electrical power loss, enabling Fail Closed or Fail Open operation with a compatible actuator and hydraulic configuration. Standard Red Horse control logic without this option is Lock Last.

Manual Hand Pump Option

A modular, lever-operated hydraulic override lets the operator manually open, close or position the valve independently of electrical power or electronic controls. Supports operation during outages, commissioning and maintenance.

ASME Hydraulic Accumulator

Stores hydraulic energy for controlled fail-safe operation of double-acting actuators. Can also supply a temporary hydraulic flow boost to increase positioning speed when rapid process response is required.

Application support

Contact VRG Controls to confirm actuator compatibility, stroke time, hydraulic volume, failure mode, approvals and accessory selection.

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