



Unlocking
Energy



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Norriseal Product Overview

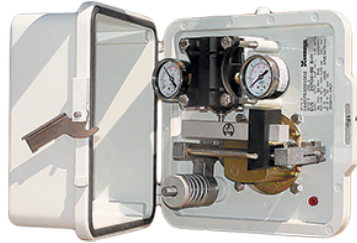
Valve and Control Solutions

▶ LIQUID LEVEL CONTROLLERS

Series EVS Zero-Leak

Environmentally friendly liquid level controllers with patented Envirosave™ snap (on/off) pilot to prevent fugitive emissions and reduce bleeding of valuable gases. Service-enhanced design simplifies installation and inspection.

- Envirosave pilot rated at zero leakage in U.S. EPA Natural Gas STAR Program report (call for details)
- Back-mount design with flush-mount internals for easy access
- Uses proven, force-balance technology for reliability and long service life
- High sensitivity for either top level or interface control
- Weather-resistant sealed enclosure
- Complies with NACE MR0175-2002



Series 1001 Pneumatic

Reliable and economical pneumatic liquid level controllers with no-bleed, force-balance operation. Available with patented Envirosave™ snap pilot to prevent fugitive emissions and reduce bleeding of valuable gases.

- Snap (on/off) or throttle (proportional) control
- Right- or left-hand mount
- Field-configurable direct or reverse action
- Removable door
- Various arm lengths, displacer sizes, diameters, connections and body materials
- Options include SPDT or DPDT electric switches



Series 1001A Weatherproof

Features weatherproof case/cover with a secure lever latch to protect internals. Options include marine service, snap or throttle pilots, and SPDT or DPDT electric switches.

- O-ring gasket seals internals from outside weather
- Manifold-style pilot assembly
- Harmful exhaust gases are vented to an exhaust manifold
- Optional Envirosave™ snap pilot
- Right- or left-hand mount



Series 1001XL Back Mount

Includes the same features as the Series 1001A with the exception of a back mount connection. The 1001 XL also utilizes a no-bleed force balance operation.



▶ LIQUID LEVEL SWITCHES

Series 1005E Electric

Float-actuated electric level switch designed for rugged use (2,000 psig maximum working pressure @ 220°F/104°C) as a high- or low-level alarm.

- Body available in carbon steel or 316 SST
- CSA listed and explosion-proof
- Available with SST or polypropylene float
- SPDT or DPDT options
- Can be mounted in an external chamber



▶ LIQUID LEVEL GAUGES

Series 1005P1 Pneumatic

Pneumatic, float-actuated switch used as a high- or low-level switch or to operate a control valve. Features a three-way pilot valve with built-in manual override and optional porting for piped exhaust.



- Rugged carbon steel or 316 SST body with SST float
- Maximum 1,500 psig working pressure @ 220°F/104°C
- Can be mounted in an external chamber

Series 1100A Pneumatic High/Low No-Bleed

Pneumatic liquid level switch that combines a cast carbon steel external chamber and a liquid level controller. Used in high- and low-level safety applications.

- Pneumatic switch
- Special marine service
- Top-, bottom- or side-mount connections
- Standard 1,480 psig maximum working pressure @ 220°F/104°C (optional 2,220 psig working pressure)
- Optional Series 1100AE incorporates an SPDT or DPDT electrical switch with a carbon steel external chamber



Series 1200 Magnetic Gauge

Accurate, low-maintenance alternative to sight glasses. Robust design is ideal for high-temperature, high-pressure and corrosive applications. Easy to install and virtually eliminates the need for extra piping.

- Visual level indication at 100 feet
- No process liquid contact with indicator glass
- Reduced maintenance
- Meets boiler specifications (ASME B31.1/B31.3)
- High and low switches available



Series 1210 Transmitter

Magnetostrictive transmitter may be externally mounted to Series 1200 gauge for non-invasive and/or redundant level control or directly inserted. Available with HART, Fieldbus or analog.



▶ CHAMBERS AND DOMES

Series 1006 Vertical Chamber

Externally mounted, vertical chambers used with Series 1001 and 1001A liquid level controllers.

- 1.5-inch or 2.0-inch flanged or NPT process connections
- Side, top or bottom connections
- Accommodates all standard displacer lengths
- ANSI 150 to 2500 pressure classes



▶ CHAMBERS AND DOMES

Series 1006 Style 4V12 Horizontal Chamber

Externally mounted carbon steel chamber (other materials available) used with Series 1001 and 1001A liquid level controllers.

- 1.0-inch NPT (3,000 psig working pressure @ 220°F/104°C) or 1.0- to 2.0-inch ANSI Class 150 to 2500 flanged process connections top and bottom
- Level controller connection can be 2.0-inch NPT or flanged



Series 1006 Style 4V03 Horizontal Chamber

Externally mounted carbon steel or 316 SST chamber used with Series 1002A, 1005E and 1005P1 liquid level switches.

- 1.0-inch NPT process connections
- 1.5-inch and 2.0-inch NPT level switch connections
- 3,000 psig working pressure @ 220°F/104°C



▶ CONTROL VALVES

Series 2023A “No Freeze”

Ideal for use as a high-pressure liquid dump valve for separators and other process vessels. Valve body is designed for constant trim immersion in vessel fluid.

- Threaded end connections
- Replaceable plug and seat
- Ball-type trim design
- Standard 300 Series SST trim
Soft Seat (Teflon®) trim option
- Maximum working pressure:
2,220 psig @ 100°F/38°C



Series 2275 Economy

Economical, high-pressure control valve for up to 3,750 psig working pressure. Adjustable tee body configuration can be plugged for either globe or angle flow.

- Screw-in closure
- Quick-change trim
- Adjustable or non-adjustable actuator



Series 2026/2027A “No Freeze”

“No-Freeze” liquid control valves for high-pressure service. The valve body screws directly into the vessel connection, immersing the plug and seat into the process liquid to resist freezing.

- Adjustable or non-adjustable diaphragm actuators
- Carbon steel, hex body
- Hammer-nut closure
- Quick-change replaceable trim
- Series 2026 maximum working pressure:
2,250 psig @ 100°F/38°C
- Series 2027A maximum working pressure:
3,000 psig @ 100°F/38°C



▶ CONTROL VALVES

Series 2220 High Pressure

Proven, "industry-standard" high-pressure control valve. Used to control liquid or gas pressure in separators, scrubbers or other types of pressure vessels.

- Close-coupled design conserves space
- Hammer-nut entry allows quick access for trim inspection or replacement
- Variety of trims, seal materials and end connections
- Patented spherical plug and matching seat for precise seating alignment
- Quick-opening trim or throttling of modified or equal-percentage trim
- Pressure-relief feature of hammer-nut/body connection improves safety



Series 2700A General-Purpose

Globe-bodied, bolted-bonnet control valve designed for a wide range of pressures, temperatures, materials and trims. Single-ported control valves have balanced, unbalanced and restricted-port trims for a variety of flow characteristics.

- 17-4 ph SST standard trim material
- Plug control (modified percentage, quick opening)
- Cage control (linear, equal percentage, quick opening)
- Trim options include erosion-resistant, soft seat ring, noise abatement and cavitation control
- Extended bonnet for high or low temperatures
- Direct or reverse-acting, yoke-mounted pneumatic diaphragm actuators
- Available in 1.0-inch through 12-inch sizes in ANSI 150 to 2500 pressure classes in threaded, raised face or ring joint end connections



Series 2200 Open Yoke

Open yoke allows mounting of positioners, limit switches or other devices, provides exposed stem for accurate travel indication and enables service at elevated temperatures.



Series 2720 Space Saving

Space-saving, economical version of the Series 2700A valve with close-coupled (yokeless) actuator. Trim variations are interchangeable; packing is non-adjustable and spring-loaded.

- Includes all Series 2700A features
- Reverse-acting, yokeless actuator with visual travel indicator
- Globe body, bolted bonnet closure
- Equal percent, modified percent, linear, low noise and cavitation trims available



Series 3023 Three-Way

Three-way, two-position high pressure control valves used for diverting or blending applications. Designed to accommodate the high differential and static pressures of system switching by giving positive shut-off while maintaining high flow capabilities.

- Hammer-nut closure with hard, soft and blow case trims available
- Reverse acting, direct acting or pressure balanced
- Teflon® V-ring, spring loaded, non-adjustable packing
- Temperature range from -20°F (-29°C) to 180°F (82°C)
- Optional open yoke for temperatures up to 400°F (204°C)



▶ BUTTERFLY VALVES

Series R200

Unique, angle-disc butterfly valves available in both resilient-seated and metal-lined designs. Feature bi-directional positive shutoff to 200 psig working pressure. Angle disc provides 360° uninterrupted differential sealing surface.

- Double-shaft seals and body bushings assure smooth, low-torque operation
- Independent flange seals
- Rigid-backed rubber seat easily field-replaced
- Non-wetted body available in lug or wafer designs
- Rigid drive, precision disc-to-shaft connection
- Resilient-seated design (R200) offered in a wide variety of elastomeric seals and metallic materials
- Metal-lined design (M200) provides positive shutoff with minimum sealing material
- Available with a variety of pneumatic, electric and hydraulic actuation



Series R285

Exclusive, angle-disc butterfly valves provide bi-directional, positive shutoff to ANSI 150 standards (285 psig). Uses a rigid-drive, precision disc-to-shaft connection without load-bearing fasteners in the flow-stream. Available in both resilient-seated and metal-lined configurations.

- Angle disc with 360° uninterrupted differential sealing surface
- Double-shaft seals and shaft bushings assure smooth, low-torque operation
- Non-wetted body available in lug or wafer design
- Offered with a variety of pneumatic, electric and hydraulic actuation



Series M200

Available in a wide range of materials, including Hastelloy®, titanium and other unique alloys.



Series M285

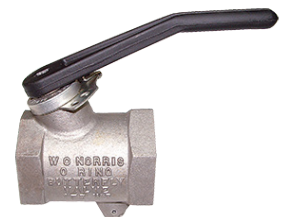
Offered in several grades of bronze, SST and high alloys such as Monel®, Inconel® and titanium.



Series B Body Style

Norris body style valve with standard aluminum bronze alloy discs for higher corrosion resistance and greater versatility of application than valves with ductile iron discs. Angle-disc design and durable construction provide outstanding performance and long service life.

- Angle-disc construction and pressure-energized disc O-ring assure bubble-tight seal
- Corrosion-resistant aluminum bronze discs
- Rugged cast iron or aluminum bodies
- Epoxy-coated cast iron bodies also available
- Threaded or grooved-end configurations



▶ PRESSURE CONTROLLERS

Series 2G Diaphragm Actuators

Designed for on/off or throttling service (when used with a positioner). Available in four size ranges with torque output to 17,000 in./lbs.

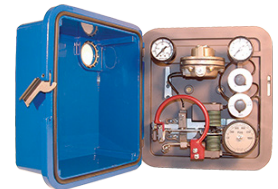
- Spring-return or double-acting
- Spring rotation from clockwise to counter-clockwise is field-reversible
- Easily adapted to various mounting styles and shaft types
- Can be actuated with as little as 10 psig supply air
- Adaptable to water or oil as the supply source
- Wide range of switches, positioners and other accessories can be mounted



Series 4900 Pneumatic

Combines reliable, low-emission operation with service enhanced design. Provides control in proportional-only, proportional plus integral (reset), differential gap or transmitter modes. Standard pressure ratings up to 10,000 psig are available with 316 SST Bourdon tube sensing elements.

- Flush-mounted internals and open design allow easy access and repair
- Removable door
- Easy, field-reversible action
- Reduced leak paths minimize bleeding of valuable gases



▶ CHECK VALVES

Series 7100 Flo-Lift® Piston Check Valve

Non-slam piston check valve designed for positive prevention of backflow in gas, air or liquid systems. Optional reduced port trims for low-flow applications.

- Available in 1.0-inch through 12-inch sizes in ANSI 150 to 2500 pressure classes in threaded, raised face or ring joint end connections
- Built-in lifting device for easy piston removal and inspection
- High flow capacity
- Low pressure drop
- Bolted closure



▶ QUALITY AND RELIABILITY

Since 1955, the name for quality, reliability and cost-efficiency has been Norriseal. Because Norriseal products are field proven, backed by extensive applications engineering and manufactured with precision. That's why Norriseal products have set the performance standards in oil and gas production, refining, chemical processing, marine, power generation and many other industrial applications.

SALES & SERVICE

Norriseal, part of the Norriseal-WellMark product offering, has engineering and customer service teams available to serve you from our headquarters in Houston and our multiple branches. Norriseal products are available via a nationwide network of talented sales representatives. Through these channels, we ensure you get the equipment you need fast, with low shipping costs.

WHY YOU CAN DEPEND ON GENUINE NORRISEAL PRODUCTS

- In-house engineering and technical support
- In-depth applications experience
- Award-winning innovation and ongoing product development
- ISO 9001 certified manufacturing
- Over five decades of industry service
- Compliance with all industry standards and specifications
- Responsive service and prompt delivery
- Field support available worldwide



This overview provides a brief introduction to an extensive line of valve and control products. Within each series, multiple design configurations and material options are also available. For example, all products can be configured to meet NACE specifications. Please contact your NorrisealWellmark representative for more details and assistance in specifying the optimal solution for your application.

**Contact Norriseal-WellMark
today for more information about
products and services.**

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