

***Nordstrom Valve***  
*Product Catalog*





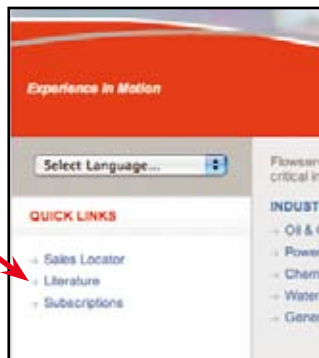
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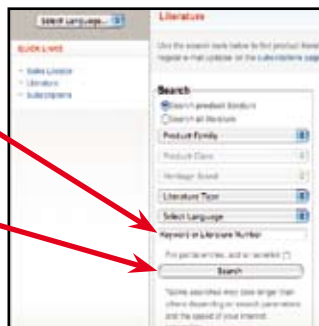
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**Flowserve  
Nordstrom Valves  
offers a complete  
range of valves,  
sealants and  
accessories to fit  
any need in any  
application.**



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## *Extraordinary Valves, Extraordinary Performance*

### *Profile of an Industry Leader*

**W**hen Sven Nordstrom invented the first lubricated plug valves in 1914, people knew he was on to something good. Nordstrom patented his design in 1916 and Nordstrom's valves quickly gained a name for rugged reliability.

Rockwell Manufacturing Company acquired the Merco-Nordstrom Valve Company in 1932 and rapidly expanded its California-based operations throughout the war years. In 1952, Rockwell broke ground for a new facility in Sulphur Springs, Texas, and expanded the plant steadily for the next 37 years.

Rockwell sold the Measurement and Flow Control Division to BTR in 1989 and the Sulphur Springs facility became the headquarters of Nordstrom Valves, Inc. In 2002, a few short years after BTR merged with Siebe to become Invensys, Invensys sold its Flow Control Division to Flowserve Corporation.

Sven Nordstrom's 1916 patent was the first of more than 90 Nordstrom patents that cover virtually every improvement to lubricated plug valves. In 1975, Nordstrom also began a new era for the industry by introducing the world's first polyethylene valve for gas distribution and has more than 2 million in service.

Today the Flowserve Sulphur Springs Operations facility has more than 300,000 square feet (28,000 square meters), is the largest lubricated plug valve manufacturing facility in the world and the largest polyethylene valve manufacturing facility in the world. To customers worldwide we offer a full range of sizes, full service, proven performance, and a name that stands for quality.





***Flowserve Nordstrom Iron and Steel Plug Valves.  
Standard Features for the following Products:***

- *Nordstrom*
  - *Super Nordstrom*
  - *Dynamic Balance*
  - *Multiport*
  - *Double DB*
- 
- **Metal Seats** for a **Dependable, Long Life**
  - The **Sealdport Sealant System** for a **Renewable Drop-Tight Seal** and is Highly **Tolerant of Debris** and the effects of **Erosion** and **Corrosion**
  - **Smooth, Contoured Flow Passages** for an **Unobstructed Flow** – no **Cavity** to collect **Product** or **Debris**
  - **Quarter-Turn Operation** for **Quick Opening and Closing**
  - **Bi-Directional Flow** for a **Simplified Installation**

**Nordstrom®**  
*Iron and Steel Plug Valves\**



**Features and Benefits**

- Available in Bolted or Screwed Gland
- A Fixed Adjustable Gland for the Ability to Adjust the Plug – in line, under pressure that maintains the adjustment once established
- Ground and Lapped Tapers on Body and Plug for Drop-Tight Shut-Off
- Meet or exceed 49CFR Part 192.145 Requirements
- Nordstrom Steel Plug valves meet API-6D and ASME B16.34 requirements

**Typical Industry Applications**

- Gas Distribution
- Oil and Gas Production
- HVAC-Balancing and Isolation
- Water and Wastewater
- Caustic Services
- Chemical and Refining

Body Material		Iron and Steel
Sizes	Iron	½ - 36 NPS (15 through 900 DN)
	Steel	6 - 12 NPS (150 through 300 DN)
Service Pressures	Iron	120 through 800 CWP (8.3 through 55.2 bar)
	Steel	ANSI Class 150 through 300 (PN 20 through PN 50)
Service Temperatures		-20°F to 350°F (-29°C to 177°C)
End Connections	Iron	Flanged and Threaded
	Steel	Buttwelding
Operation		Wrench, Worm Gear, and Spur Gear
Pattern		Short, Regular, and Venturi

\* For additional information on the iron valve see NVENBR1003 - see page 2

\* For additional information on the steel valve see NVENBR1004 - see page 2

\* Water and Waste Water applications see NVENBR1005 - see page 2

**Super Nordstrom®**  
Iron and Steel Plug Valves\*



**Features and Benefits**

- Fire Tested and Qualified (Steel Only) to API-6FA to assure Safety
- A Mechanically Balanced Plug for Predictable Torque
- Internal Stops eliminate trash pockets
- CSA Certified meeting the requirements of CAN/CGA-3.11-M88 models available
- Meet or exceed 49CFR Part 192.145 Requirements
- Super Nordstrom Steel Plug valves meet API-6D and ASME B16.34 requirements

**Typical Industry Applications**

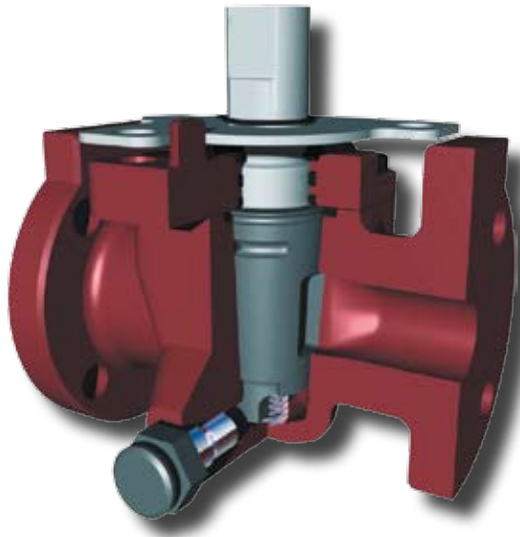
- Gas Distribution
- Oil and Gas Production
- HVAC-Balancing and Isolation
- Water and Wastewater
- Caustic Services
- Chemical and Refining

Body Material	Iron and Steel	
Sizes	Iron	½ - 5 NPS (15 through 125 DN)
	Steel	½ - 4 NPS (15 through 100 DN)
Service Pressures	Iron	200 CWP (13.8 bar)
	Steel	4-Bolt Cover: ANSI Class 150 through 600 (PN 20 through PN 100)
		2-Bolt Cover: 200 CWP (13.8 bar)
Service Temperatures	Iron and Steel	2-Bolt Cover: -20°F to 200°F (-29°C to 93°C)
	Steel	4-Bolt Cover: -20°F to 350°F (-29°C to 177°C)
End Connections	Iron	Flanged and Threaded
	Steel	4-Bolt Cover: Flanged and Threaded
		2-Bolt Cover: Socket-Welding, Buttwelding, and Flanged by Buttwelding
Operation	Wrench	
Pattern	Short and Regular	

\* For additional information on the iron valve see NVENBR1003 - see page 2

\* For additional information on the steel valve see NVENBR1004 - see page 2

## Super Nordstrom® 114 & 115 Iron Plug Valves\*



### Features and Benefits

- Integral Stop and Locking Device
- Actuator Mounting Pads for convenient field attachment of Operator/Actuator Mounting
- Side-Mounted Sealant Injection Fitting for Effective Plug Jacking
- A Mechanically Balanced Plug for Predictable Torque
- CSA Certified meeting the requirements of CAN/CGA-3.11-M88 models available
- Meet or exceed 49CFR Part 192.145 Requirements
- Factory Mutual Approved models available

### Typical Industry Applications

- Gas Distribution
- Gas Safety Control Cocks
- Oil and Gas Production
- HVAC-Balancing and Isolation
- Water and Wastewater
- Caustic Services
- Chemical and Refining

Body Material	Iron
Sizes	½ - 4 NPS (15 through 100 DN)
Service Pressure	200 CWP (13.8 bar)
Service Temperatures	-20°F to 350°F (-29°C to 177°C)
End Connections	Flanged and Threaded
Operation	Wrench
Pattern	Regular

\* Additional information can be found in NVENBR1003 - see page 2



## **Multiport Plug Valves**

### **Iron and Steel Plug Valves\***



#### **Features and Benefits**

- Provides Simplification of Piping and Convenience in Operation
- One 3-way or 4-way Multiport valve can Replace two, three, or four straightway valves
- Eliminates the use of other Fittings such as Tees and Elbows
- Many Port Arrangements Available to Accommodate Different Requirements
- Ports arranged to prevent the mixture of fluids or loss of pressure
- Transflow Options also available
- Meet or exceed 49CFR Part 192.145 requirements

#### **Typical Industry Applications**

- Gas Distribution
- Oil and Gas Production
- HVAC-Balancing and Isolation
- Water and Wastewater
- Caustic Services
- Chemical and Refining

Body Material	Iron and Steel	
Sizes	Iron	½ - 12 NPS (15 through 300 DN)
	Steel	½ - 10 NPS (15 through 250 DN)
Service Pressures	Iron	200 through 400 CWP (13.8 through 27.6 bar)
	Steel	ANSI Class 150 through 1500 (PN 20 through PN 250)
Service Temperatures	Nordstrom & Super Nordstrom	-20°F to 350°F (-29°C to 177°C)
	Dynamic Balance	-20°F to 450°F (-29°C to 232°C)
End Connections	Flanged and Threaded	
Operation	Wrench and Worm Gear	
Pattern	Regular and Transflow	

\* Additional information can be found in NVENBR1002 - see page 2

**Dynamic Balance<sup>®</sup> Iron**  
*Low Maintenance Iron Valves for Gas,  
 Water and Wastewater Services\**



**Features and Benefits**

- Blowout Proof Steel Stem
- Weatherproof Gear Operator available to Eliminate Ground Water and Dirt from Entering Gear Housing
- Plug Balancing Spring Pre-loads the Plug to Prevent Vibration and Thermal Cycling from Wedging the Plug into the Body Taper Regardless of Installed Position
- O-Ring Gland Allows for Repair of Stem Seal without the need for Stem Removal
- Ground and Lapped Tapers on Body and Plug for Drop-Tight Shut-Off
- Meet or exceed 49CFR Part 192.145 requirements

**Typical Industry Applications**

- Gas Distribution
- Oil and Gas Production
- HVAC-Balancing and Isolation
- Water and Wastewater
- Caustic Services
- Chemical and Refining

Body Material	Iron
Sizes	4 - 20 NPS (100 through 500 DN)
Service Pressures	150 CWP through 200 CWP (10.4 through 13.8 bar)
Service Temperatures	-20°F to 350°F (-29°C to 177°C)
End Connections	Flanged
Operation	Wrench and Worm Gear
Pattern	Regular

\* Additional information can be found in NVENBR1003 and NVENBR1005 - see page 2

## Dynamic Balance® Steel Pressure Balance Steel Plug Valves\*



### Features and Benefits

- Blowout Proof Steel Stem
- Preloaded, Pressure Energized Stem Packing for Zero Leakage
- Ground and Lapped Tapers on Body and Plug for Drop-Tight Shut-Off
- Fire Tested and Qualified to API-6FA to assure safety
- Adjustable Plug for Extended valve life and Bubble-Tight Seal under changing conditions
- Flexibility to Rotate the plug 180° while In-Line and Under Pressure to provide a New Seating Surface
- Meet API-6D and ASME B16.34 requirements

### Typical Industry Applications

- Oil and Gas Production (Including NACE)
- Offshore Oil and Gas Production (with Offshore Construction)
- Gas Transmission
- Gas Distribution
- Slurries
- Refining
- Water and Wastewater
- A variety of High Temperature and/or High Pressure Applications

Body Material		Steel
Sizes		1 - 30 NPS (25 through 750 DN)
Service Pressures	ANSI Class	150 through 2500 (PN 20 through PN 420)
	API	3000 and 5000 psi (20.7 and 34.5 MPa)
Service Temperatures	Standard Construction	-20°F to 450°F (-29°C to 232°C)
	Special Construction	-50°F to 1500°F (-46°C to 816°C)
End Connections		Flanged, Threaded, Hardfaced, Buttwelding, Flanged by Buttwelding and Socket-Welding. Clamp Ends and other special connections available.
Operation		Wrench and Worm Gear
Pattern		Short, Regular, and Venturi
Special Construction		NACE, Low Temperature, and other special constructions available including Diamond Port and Full Round Opening

\* Additional information can be found in NVENBR1004 and NVENBR1015 for slurry service - see page 2

## Double DB<sup>®</sup> Plug Valves

### Steel Plug Valves\*



#### Features and Benefits

- Designed for Critical Shutoff Applications where Absolute Shutoff is Required for Safety, Environmental or Process reasons
- Installation and maintenance costs are reduced dramatically
- Uses proven Dynamic Balance Pressure Balance and Sealing Technology
- Various Bleed Off Connections available such as, Ring Joint, Socket Weld, Threaded, Gate Valves, Needle Valves, etc.
- Protected Pressure Balancing ensures that the Balancing Holes are not Exposed to the Line Media
- Ground and Lapped Tapers on Body and Plug for Drop-Tight Shut-Off

#### Typical Industry Applications

- Compressor Isolation
- Pump Isolation
- Meter Isolation
- Water or gas injection system isolation
- Critical vents, drains and blow-downs to atmosphere

Body Material		Steel
Sizes		2 - 12 NPS (50 through 300 DN)
Service Pressure	ANSI Class	150 through 2500 (PN 20 through PN 420)
	API	5000 (34.5 mPA)
End Connections		Flanged
Operation		Wrench and Worm Gear

\* Additional information can be found in NVENBR1016 and NVENBR1015 for slurry service - see page 2

## Hypresphere®

### Trunnion-Mounted Ball Valves\*



#### Features and Benefits

- Smoothly contoured, spherical body that maximizes the strength and integrity of the body shell
- The ball, with Trunnion's at the top and bottom is coated with a Low-friction material to provide a Predictable Operating Torque
- Triple Seat Sealing System
  - Wide land area metal-to metal seats
  - Nylon resilient soft seat
  - Sealant Injection System
- Seat assembly designed to provide Automatic Pressure Relief of the Body Cavity into the Downstream Piping
- Top and bottom Trunnions reduce torque and weight while allowing for Double Block-and-Bleed capability
- O-Ring Stem Seal with a Sealant Injection Backup System
- The Seat and Body Seal consists of an O-Ring backed by a Steel Fire Seal ring
- A Seat Spring that Loads the seat into the Sphere to provide Sealing at Low Pressures
- Fully contained Sealant Groove thus assuring an Effective Sealant Injection System

#### Typical Industry Applications

- Natural Gas Transmission lines (Including NACE)
- Offshore Oil and Gas Production (with Offshore Construction)
- Gas Transmission
- Gas Distribution

Body Material		Steel
Sizes		8 - 24 NPS (200 through 600 DN)
Service Pressures		ANSI Class 300 and 600 (PN 50 through PN 100)
Service Temperatures	Standard Construction	-20°F to 250°F (-29°C to 121°C)
	With Viton® O-rings	-0°F to 300°F (-17°C to 149°C)
	Low Temperature	-50°F to 200°F (-45°C to 93°C)
End Connections		Flanged, Buttwelding, and Flanged by Buttwelding
Operation		Worm Gear
Pattern		Full Bore

\* Additional information can be found in H 600 - see page 2

## Polyvalve®

### Polyethylene Ball Valves



#### Features and Benefits

- Bubble-Tight Shutoff from Dual Elastomeric Seats
- Fused Body Shell and Pipe Joints remove leak paths to atmosphere
- High-grade Polymeric materials eliminate Corrosion
- Multiple Elastomeric Stem Seals
- No Metal Internal Parts except on “C” style valves that have a High Strength Stainless Steel Stem
- Smooth Bore gives excellent flow characteristics in both full and reduced port designs
- Poly-Water valves are NSF Certified
- PolyGas valves meet or exceed 49CFR Part 192.145 requirements

#### Typical Industry Applications

- Natural Gas
- Water and Wastewater
- Chemical

Body Material	Polyethylene, medium & high density
Sizes	½ - 12 NPS (15 through 300 DN)
Service Pressures	Maximum allowable for PE materials (gas 100 psi, water 200 psi)
Service Temperatures	-20°F to 140°F (-29°C to 60°C)
End Connections	Heat-fusion, suitable for electrofusion, Flanged ends available upon request.
Operation	Wrench (½" through 8") and Gear Operated (size 8" and 12")
Pattern	Full and Reduced Port

- Poly-Gas® Valve for Natural Gas (document NVENBR1006\*)
- Poly-Chem® Valve for Chemical Services (document NVENBR1007\*)
- Poly-Water® Valve for Potable and Wasterwater Services (document NVENBR1008\*)
- Poly-Stab® Valve for Natural Gas (document NVENBR1018\*)

\* see page 2

## Sealants and Sealant Equipment



### Features and Benefits

- Positive Pressure-Seal for a Bubble-Tight Shut-Off
- Provides a Coating on the Plug & fills the Sealport Groove System for a Self Cleaning Seating Surface, Extended Service Life, and Ease of Operation
- Hydraulically Adjusts the Plug (not necessary for Super Nordstrom and Dynamic Balance) for Ease of Operation
- 15 Types of Sealant with their own specific service compatibilities to match the right sealant the application
- Sealant is available in Stick or Bulk Grade
- A variety of Sealant Injection Equipment to meet Installation and Maintenance needs

### Typical Industry Applications

- Gas Distribution
- Oil and Gas Production
- Oil and Gas Transmission
- HVAC-Balancing and Isolation
- Water and Wastewater
- Caustic Services
- Chemical and Refining
- Mining/Slurry

- Sealants for Plug, Ball, and Gate Valves (document NVENBR1014\*)
- Valve Conditioner and Valve Purge (document NVENBR1014\*)
- Nordstrom 400-D Hand Gun (document NVENIM2002\* and NVENBR1014\*)
- Nordstrom 400-A Hand Gun (document NVENBR1014\*)
- Nordstrom 400-B Bucket Pump (document NVENBR1014\*)
- Sealant Fittings (document NVENBR1014\*)
- Hypregun-Plus 5Q (document NVENIM2003\* and NVENBR1014\*)
- Hypregun-Plus 5G (document NVENIM2004\* and NVENBR1014\*)

\* see page 2



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