



# **COVER EVERY APPLICATION WITH ONE CONTROL BALL VALVE BRAND.**

Control Ball Valve  
Quick Selection Guide

**Honeywell**

# MORE ACCURATE FLOW RATE WITH LESS WEAR AND TEAR

The Honeywell characterized control ball valves feature a parabolic flow insert that's integral to the ball. Its unique construction enables a smoother flow curve and greater degree of rotation responsiveness.

## SIMPLIFIED SELECTION

Our new valve numbering system makes model selection a snap. The complete line of Honeywell actuators and valves are already proven in more than three million buildings worldwide. So specify Honeywell ball valves, and put a proven performer on every job.

Honeywell control ball valves use the same actuator mounting bracket for all 1/2" – 3" valves, whether spring or non-spring return actuators. And Honeywell's Cv ratings are similar to globe valve Cv ratings, making it easier to design your system using a ball valve.

### Accurate flow control

Parabolic flow inserts integral to the ball provide equal percentage control, which ensures linear heat transfer at the coil.

### Simplified actuator selection

Multi-actuator mounting bracket allows the same bracket to be utilized on all valves.

### Save with lower-cost actuators

Lower breakaway torque allows the use of more affordable actuators when valves need to be refitted.

### Packless, field replaceable stem

Allows valve to be serviced and replaced on-pipe.

### Built for safety and endurance

- Blowout-proof stem withstands high pressure for safety.
- NORYL® material used for parabolic inserts extends valve life and performance.
- Optional NEMA 3R actuator enclosure for weatherproof applications.

**Honeywell's control ball valve line has a large range of Cv's to meet all of your specified requirements.**

### Flanged Control Ball Valve Offering





# MVN ACTUATORS



Click-on assembly cuts installation time - no tools needed.

Position indicator shows the open or closed position of the stem or ball valve for easy commissioning.

Compact design saves space allowing installation in confined areas.

## GET THE JOB DONE ON TIME AND UNDER BUDGET.

The new MVN rotary valve actuator for use with control ball valves and pressure regulated control valves reduces labor costs associated with mechanical and electrical installation, commissioning and service. This innovative design makes assembly easy, saving you time and money.



Exclusive click-on assembly



Position indicator



Removable terminal block



Conduit connection

### Tool-Free Installation

The unique design dramatically cuts installation time. Honeywell's exclusive click-on assembly simply snaps onto the valve — no tools needed. And the position indicator, another Honeywell exclusive, shows the position of the valve from any angle for easy commissioning. From testing the installation to monitoring the valve position, you'll spend less time on the job.

### Installation Flexibility

The MVN actuator not only saves time, it saves space. Thanks to the compact design, you can use the MVN in confined areas or simply take advantage of more working room in normal spaces. Plus, multiple wiring options allow flexible electrical installation. Options such as a removable terminal block, an attached cable and a conduit connection, give installers the flexibility to meet the requirements for a specific project.

### Just Your Size

Because of the lower torque requirement of Honeywell valves, the MVN actuator can be used on valves up to 1-1/4" diameter. Just click the MVN onto any of a wide range of compatible commercial valves and you're ready to begin commissioning.

### Backed by Honeywell

You take pride in doing the job right and your customers depend on you. You need to be able to trust the products you use and you can count on Honeywell. From a five-year warranty to training and technical expertise you can depend on Honeywell support just as you depend on Honeywell products.

### The Right Choice, MVN

Fast, flexible installation combined with easy commissioning and service help you finish your projects on time and under budget.

# MS AND MN ACTUATORS

## **PRECISE, RELIABLE PERFORMANCE. LASTING VALUE.**

Everything you look for in direct-coupled actuators hinges on quality. And quality engineering is what makes Honeywell's complete line of actuators the top performers in the industry.

### **Improve Installation Time**

Self-centering shaft adapter provides mounting flexibility and greater clamping force. Common wiring among families for every signal saves installation time.

### **Decrease Material Cost**

Detachable access cover allows direct wiring without a junction box.

### **Reduce Inventory and Selection Time**

With the signal mode adaptor that adapts models to two position, floating and modulating application.

### **Increase Control and Accuracy**

More than 200 reposition steps for modulating models provide precise control.

### **Increased Flexibility**

Select models are available with or without three foot actuator whips cable.



### **NEMA 3R ENCLOSURE**

- (IP54) rated enclosure for outdoor applications



# CONTROL BALL VALVE SELECTION CRITERIA

2-WAY				
ATTRIBUTE	SPECIFICATION		NPT THREAD	ANSI FLANGE
	(Inch)	(DN)	VBN2	VBF2
Valve Size	0.5	15	•	
	0.75	20	•	
	1	25	•	
	1.25	32	•	
	1.5	40	•	
	2	50	•	
	2.5	65	•	
	3	80	•	
	4	100		•
	5	125		•
	6	150		•
Static Pressure	Class 125 (240 psi)			•
	360 psi		•	
Close-Off Pressure *	100 psi (min)		•	
	70 psi (min)			•
Media	Chilled Water (50% glycol max)		•	•
	Hot Water (50% glycol max)		•	•
Medium	Min -22 ° F / Max 250 ° F		•	•
Flow Characteristic	Equal Percentage		•	•
	Linear (full port valves)		•	
Maximum	ANSI Class IV (0.01% of Cv max)		•	•
Rangeability	50:1 min ***		•	•
Trim	Nickel plated brass		•	
	Stainless steel		•	•
In-line Serviceability	Stem replacement kit		•	•
Actuator Options	Modulating 2-10 Vdc		•	•
	Sylk		•****	
	24 Vac Floating		•	•
	24 Vac 2-position		•	•
	Fail-Safe (FO/FC)		•	•
Accessories	Actuator Cable Assembly **		•	

3-WAY				
ATTRIBUTE	SPECIFICATION		NPT THREAD	ANSI FLANGE
	(Inch)	(DN)	VBN3	VBF3
Valve Size	0.5	15	•	
	0.75	20	•	
	1	25	•	
	1.25	32	•	
	1.5	40	•	
	2	50	•	
	2.5	65	•	
	3	80	n/a	
	4	100		•
	5	125		•
	6	150		•
Static Pressure	Class 125 (240 psi)			•
	360 psi		•	
Close-Off Pressure *	40 psi (min)		•	
	70 psi (min)			•
Media	Chilled Water (50% glycol max)		•	•
	Hot Water (50% glycol max)		•	•
Medium Temperature	Min -22 ° F / Max 250 ° F		•	•
Flow Characteristic	Equal Percentage		•	•
	Linear (full port valves)		•	
Maximum Seat Leakage	ANSI Class IV (0.01% Cv max.)		•	A-port
	ANSI Class III (0.10% Cv max.)			B-port
Rangeability	Does not apply to 3-way valves			
Trim	Nickel plated brass		•	
	Stainless steel			•
In-line Serviceability	Stem replacement kit		•	•
Actuator Options	Modulating 2-10 Vdc		•	•
	Sylk		•****	
	24 Vac Floating		•	•
	24 Vac 2-position		•	•
	Fail-Safe (FO/FC)		•	•
Accessories	Actuator Cable Assembly **		•	

\* Maximum operating differential pressure. Maximum differential pressure for quiet service may be lower.

\*\* On MVN actuators only. Available separately or factory installed. Standard on Diamond actuators.

\*\*\* Cv 0.38 and Cv 0.68 in 1/2" size, and Cv 0.31 and Cv 0.63 in 3/4" has less than 50:1 rangeability.

\*\*\*\*Available on 1/2" to 1-1/4" valves

\* Maximum operating differential pressure. Maximum differential pressure for quiet service may be lower.

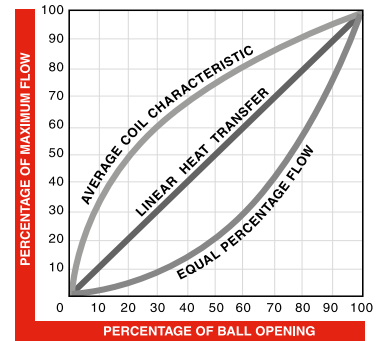
\*\* On MVN actuators only. Available separately or factory installed. Standard on Diamond actuators.

\*\*\* Cv 0.38 and Cv 0.68 in 1/2" size, and Cv 0.31 and Cv 0.63 in 3/4" has less than 50:1 rangeability.

\*\*\*\*Available on 1/2" to 1-1/4" valves

## THE PARABOLIC FLOW INSERT

The Parabolic Flow insert produces a smooth and responsive flow curve. The valve achieves an equal percentage flow characteristic resulting in linear heat transfer for optimal control. Unlike a disc that sits outside of the ball, the characterized insert is integral to the ball, resulting in longer service life and higher differential pressure capabilities.



## CONTROL BALL VALVE APPLICATIONS

		Pipe Size, inches (DN)										
		1/2" DN15	3/4" DN20	1" DN25	1-1/4" DN32	1-1/2" DN40	2" DN50	2-1/2" DN65	3" DN80	4" DN100	5" DN125	6" DN150
Unitary Equipment	Fan Coil Units	Control ball valves										
	Unit Heaters	Control ball valves										
	Convectors	Control ball valves										
	Radiant Panels	Control ball valves										
	Unit Ventilator	Control ball valves										
	Reheat Coils	Control ball valves										
	Water Source Heat Pump	Control ball valves										
	Blower Coil	Control ball valves										
Air Handling Units	Heating & Cooling Coils	Threaded control ball valves							Flanged ball valve			
	Chilled Ceiling	Threaded control ball valves										
Central Plant	Outdoor reset	Threaded control ball valves							Flanged ball valve			
	Boiler Bypass	Threaded control ball valves							Flanged ball valve			
	Heat reclaim	Threaded control ball valves										
	Greenhouse	Threaded control ball valves							Flanged ball valve			
Thermal Storage	Threaded control ball valves											
Chillers	Threaded control ball valves							Flanged ball valve				

# PRODUCT SELECTION - VALVES

## 2-Way Control Ball Valves With Non Spring Return Actuators 1/2"-3"



Example of complete orderable part number: **VBN2A000.38SA+MVN643A0000+C1**

Control Ball Valve, Female NPT Thread, 2-way, 1/2", CV .38, Stainless Steel trim, Standard Profile with MVN643A0000 Actuator, Fail in place and 1 meter cable.

Standard profile provides clearance between valve and actuator for insulation. Low profile enables installation of valve and actuator in tight spaces.

**5-YEAR  
LIMITED  
WARRANTY**

If the complete orderable part number is too long for your ordering system, please refer to the Short Order Codes on pg 12 to 33.

Valve Specification		Valve Profile	Standard Profile		Low Profile		Black Bracket	
Valve Size (inches)	Close-off (psi)	Valve Trim	Plated Brass	Stainless Steel	Plated Brass	Stainless Steel	Plated Brass	Stainless Steel
		Cv	Valve Body Model Number					
2-Way			VBN2A000.38PA	VBN2A000.38SA	VBN2A000.38PL	VBN2A000.38SL	VBN2A000.38PX	VBN2A000.38SX
			VBN2A000.68PA	VBN2A000.68SA	VBN2A000.68PL	VBN2A000.68SL	VBN2A000.68PX	VBN2A000.68SX
			VBN2A001.30PA	VBN2A001.30SA	VBN2A001.30PL	VBN2A001.30SL	VBN2A001.30PX	VBN2A001.30SX
			VBN2A002.00PA	VBN2A002.00SA	VBN2A002.00PL	VBN2A002.00SL	VBN2A002.00PX	VBN2A002.00SX
			VBN2A002.60PA	VBN2A002.60SA	VBN2A002.60PL	VBN2A002.60SL	VBN2A002.60PX	VBN2A002.60SX
			VBN2A004.70PA	VBN2A004.70SA	VBN2A004.70PL	VBN2A004.70SL	VBN2A004.70PX	VBN2A004.70SX
			VBN2A008.00PA	VBN2A008.00SA	VBN2A008.00PL	VBN2A008.00SL	VBN2A008.00PX	VBN2A008.00SX
			VBN2A011.70PA	VBN2A011.70SA	VBN2A011.70PL	VBN2A011.70SL	VBN2A011.70PX	VBN2A011.70SX
			VBN2B000.31PA	VBN2B000.31SA	VBN2B000.31PL	VBN2B000.31SL	VBN2B000.31PX	VBN2B000.31SX
			VBN2B000.63PA	VBN2B000.63SA	VBN2B000.63PL	VBN2B000.63SL	VBN2B000.63PX	VBN2B000.63SX
		VBN2B001.20PA	VBN2B001.20SA	VBN2B001.20PL	VBN2B001.20SL	VBN2B001.20PX	VBN2B001.20SX	
		VBN2B002.50PA	VBN2B002.50SA	VBN2B002.50PL	VBN2B002.50SL	VBN2B002.50PX	VBN2B002.50SX	
		VBN2B004.30PA	VBN2B004.30SA	VBN2B004.30PL	VBN2B004.30SL	VBN2B004.30PX	VBN2B004.30SX	
		VBN2B007.40PA	VBN2B007.40SA	VBN2B007.40PL	VBN2B007.40SL	VBN2B007.40PX	VBN2B007.40SX	
		VBN2B010.10PA	VBN2B010.10SA	VBN2B010.10PL	VBN2B010.10SL	VBN2B010.10PX	VBN2B010.10SX	
		VBN2B014.70PA	VBN2B014.70SA	VBN2B014.70PL	VBN2B014.70SL	VBN2B014.70PX	VBN2B014.70SX	
		VBN2B029.00PA	VBN2B029.00SA	VBN2B029.00PL	VBN2B029.00SL	VBN2B029.00PX	VBN2B029.00SX	
		VBN2C004.40PA	VBN2C004.40SA	VBN2C004.40PL	VBN2C004.40SL	VBN2C004.40PX	VBN2C004.40SX	
		VBN2C009.00PA	VBN2C009.00SA	VBN2C009.00PL	VBN2C009.00SL	VBN2C009.00PX	VBN2C009.00SX	
		VBN2C015.30PA	VBN2C015.30SA	VBN2C015.30PL	VBN2C015.30SL	VBN2C015.30PX	VBN2C015.30SX	
		VBN2C026.00PA	VBN2C026.00SA	VBN2C026.00PL	VBN2C026.00SL	VBN2C026.00PX	VBN2C026.00SX	
		VBN2C044.00PA	VBN2C044.00SA	VBN2C044.00PL	VBN2C044.00SL	VBN2C044.00PX	VBN2C044.00SX	
		VBN2C054.00PA	VBN2C054.00SA	VBN2C054.00PL	VBN2C054.00SL	VBN2C054.00PX	VBN2C054.00SX	
		VBN2D004.40PA	VBN2D004.40SA	VBN2D004.40PL	VBN2D004.40SL	VBN2D004.40PX	VBN2D004.40SX	
		VBN2D008.30PA	VBN2D008.30SA	VBN2D008.30PL	VBN2D008.30SL	VBN2D008.30PX	VBN2D008.30SX	
		VBN2D014.90PA	VBN2D014.90SA	VBN2D014.90PL	VBN2D014.90SL	VBN2D014.90PX	VBN2D014.90SX	
		VBN2D025.00PA	VBN2D025.00SA	VBN2D025.00PL	VBN2D025.00SL	VBN2D025.00PX	VBN2D025.00SX	
		VBN2D037.00PA	VBN2D037.00SA	VBN2D037.00PL	VBN2D037.00SL	VBN2D037.00PX	VBN2D037.00SX	
		VBN2D041.00PA	VBN2D041.00SA	VBN2D041.00PL	VBN2D041.00SL	VBN2D041.00PX	VBN2D041.00SX	
		VBN2D102.00PA	VBN2D102.00SA	VBN2D102.00PL	VBN2D102.00SL	VBN2D102.00PX	VBN2D102.00SX	
						VBN2E023.00PX	VBN2E023.00SX	
						VBN2E030.00PX	VBN2E030.00SX	
						VBN2E041.00PX	VBN2E041.00SX	
						VBN2E074.00PX	VBN2E074.00SX	
						VBN2E172.00PX	VBN2E172.00SX	
						VBN2F042.00PX	VBN2F042.00SX	
						VBN2F057.00PX	VBN2F057.00SX	
						VBN2F071.00PX	VBN2F071.00SX	
						VBN2F100.00PX	VBN2F100.00SX	
						VBN2F108.00PX	VBN2F108.00SX	
						VBN2F210.00PX	VBN2F210.00SX	
						VBN2F266.00PX	VBN2F266.00SX	
						VBN2G045.00PX	VBN2G045.00SX	
						VBN2G055.00PX	VBN2G055.00SX	
						VBN2G072.00PX	VBN2G072.00SX	
						VBN2G101.00PX	VBN2G101.00SX	
						VBN2G162.00PX	VBN2G162.00SX	
						VBN2G202.00PX	VBN2G202.00SX	
						VBN2H049.00PX	VBN2H049.00SX	
						VBN2H063.00PX	VBN2H063.00SX	
						VBN2H082.00PX	VBN2H082.00SX	
						VBN2H124.00PX	VBN2H124.00SX	
						VBN2H145.00PX	VBN2H145.00SX	

N/A

Actuator Features				MVN Standard Profile	MVN Low Profile	DCA or DCA w/ switches
Control Signal	Timing	Voltage	Enclosure	Actuator Model Number		
Floating	90 sec.	24 VAC/DC*	NEMA 2	+MVN613A0000	+MVN613L0000	+MN6105A1011 or +MN6105A1201
Fast SPDT	30 sec.			+MVN643A0000	+MVN643L0000	
Modulating	90 sec.			+MVN713A0000	+MVN713L0000	+MN7505A2001 or +MN7505A2209
Accessories	1 meter cable NEMA 3R enclosure			+C1 N/A		N/A +3R

\*MVN613 24 VAC only



# PRODUCT SELECTION - VALVES

## 2-Way Control Ball Valves With Spring Return Actuators 1/2"-3"



Example of complete orderable part number: **VBN2A000.38SX+MS7103A2024+FSC**  
 Control Ball Valve, Female NPT Thread, 2-way, 1/2", CV .38, Black Bracket, Stainless Steel trim with MS7103A2024 Actuator, Fail closed.

**5-YEAR  
LIMITED  
WARRANTY**

If the complete orderable part number is too long for your ordering system, please refer to the Short Order Codes on pg 12 to 33.

2-Way

Valve Specification		Valve Profile	Black Bracket			
Valve Size (inches)	Close-off (psi)	Valve Trim	Plated Brass	Stainless Steel	Plated Brass	Stainless Steel
		Cv	Valve Body Model Number			
1/2"	130	0.38	VBN2A000.38PX	VBN2A000.38SX	VBN2A000.38PX	VBN2A000.38SX
		0.68	VBN2A000.68PX	VBN2A000.68SX	VBN2A000.68PX	VBN2A000.68SX
		1.3	VBN2A001.30PX	VBN2A001.30SX	VBN2A001.30PX	VBN2A001.30SX
		2	VBN2A002.00PX	VBN2A002.00SX	VBN2A002.00PX	VBN2A002.00SX
		2.6	VBN2A002.60PX	VBN2A002.60SX	VBN2A002.60PX	VBN2A002.60SX
		4.7	VBN2A004.70PX	VBN2A004.70SX	VBN2A004.70PX	VBN2A004.70SX
		8	VBN2A008.00PX	VBN2A008.00SX	VBN2A008.00PX	VBN2A008.00SX
		11.7	VBN2A011.70PX	VBN2A011.70SX	VBN2A011.70PX	VBN2A011.70SX
3/4"	130	0.31	VBN2B000.31PX	VBN2B000.31SX	VBN2B000.31PX	VBN2B000.31SX
		0.63	VBN2B000.63PX	VBN2B000.63SX	VBN2B000.63PX	VBN2B000.63SX
		1.2	VBN2B001.20PX	VBN2B001.20SX	VBN2B001.20PX	VBN2B001.20SX
		2.5	VBN2B002.50PX	VBN2B002.50SX	VBN2B002.50PX	VBN2B002.50SX
		4.3	VBN2B004.30PX	VBN2B004.30SX	VBN2B004.30PX	VBN2B004.30SX
		7.4	VBN2B007.40PX	VBN2B007.40SX	VBN2B007.40PX	VBN2B007.40SX
		10.1	VBN2B010.10PX	VBN2B010.10SX	VBN2B010.10PX	VBN2B010.10SX
		14.7	VBN2B014.70PX	VBN2B014.70SX	VBN2B014.70PX	VBN2B014.70SX
1"	100	29	VBN2B029.00PX	VBN2B029.00SX	VBN2B029.00PX	VBN2B029.00SX
		4.4	VBN2C004.40PX	VBN2C004.40SX	VBN2C004.40PX	VBN2C004.40SX
		9	VBN2C009.00PX	VBN2C009.00SX	VBN2C009.00PX	VBN2C009.00SX
		15.3	VBN2C015.30PX	VBN2C015.30SX	VBN2C015.30PX	VBN2C015.30SX
		26	VBN2C026.00PX	VBN2C026.00SX	VBN2C026.00PX	VBN2C026.00SX
		44	VBN2C044.00PX	VBN2C044.00SX	VBN2C044.00PX	VBN2C044.00SX
		54	VBN2C054.00PX	VBN2C054.00SX	VBN2C054.00PX	VBN2C054.00SX
		4.4	VBN2D004.40PX	VBN2D004.40SX	VBN2D004.40PX	VBN2D004.40SX
1-1/4"	100	8.3	VBN2D008.30PX	VBN2D008.30SX	VBN2D008.30PX	VBN2D008.30SX
		14.9	VBN2D014.90PX	VBN2D014.90SX	VBN2D014.90PX	VBN2D014.90SX
		25	VBN2D025.00PX	VBN2D025.00SX	VBN2D025.00PX	VBN2D025.00SX
		37	VBN2D037.00PX	VBN2D037.00SX	VBN2D037.00PX	VBN2D037.00SX
		41	VBN2D041.00PX	VBN2D041.00SX	VBN2D041.00PX	VBN2D041.00SX
		102	VBN2D102.00PX	VBN2D102.00SX	VBN2D102.00PX	VBN2D102.00SX
		23			VBN2E023.00PX	VBN2E023.00SX
		30			VBN2E030.00PX	VBN2E030.00SX
1-1/2"	100	41			VBN2E041.00PX	VBN2E041.00SX
		74			VBN2E074.00PX	VBN2E074.00SX
		172			VBN2E172.00PX	VBN2E172.00SX
		42			VBN2F042.00PX	VBN2F042.00SX
		57			VBN2F057.00PX	VBN2F057.00SX
2"	100	71			VBN2F071.00PX	VBN2F071.00SX
		100			VBN2F100.00PX	VBN2F100.00SX
		108			VBN2F108.00PX	VBN2F108.00SX
		210			VBN2F210.00PX	VBN2F210.00SX
		266		N/A	VBN2F266.00PX	VBN2F266.00SX
		45			VBN2G045.00PX	VBN2G045.00SX
		55			VBN2G055.00PX	VBN2G055.00SX
		72			VBN2G072.00PX	VBN2G072.00SX
2-1/2"	100	101			VBN2G101.00PX	VBN2G101.00SX
		162			VBN2G162.00PX	VBN2G162.00SX
		202			VBN2G202.00PX	VBN2G202.00SX
		49			VBN2H049.00PX	VBN2H049.00SX
		63			VBN2H063.00PX	VBN2H063.00SX
		82			VBN2H082.00PX	VBN2H082.00SX
		124			VBN2H124.00PX	VBN2H124.00SX
		145			VBN2H145.00PX	VBN2H145.00SX

Actuator Features				DCA or DCA w/ switches	DCA or DCA w/ switches
Control Signal	Timing	Voltage	Enclosure	Actuator Model Number	
Modulating	90 sec.	24 VAC/DC	NEMA 2	+MS7103A2024 or +MS7103A2224	
Sytk	30-180 sec.			+MS3103J1023 or +MS3103J1223	
2-position	45 sec.	120 VAC		+MS8105A1030 or +MS8105A1130	
2-position	45 sec.			+MS4105A1030 or +MS4105A1130	
Fail Safe Position	F50 - Fail Safe Open, F5C - Fail Safe Closed			+F50 or +F5C	+F50 or +F5C
Accessories	NEMA 3R enclosure			N/A	+3R

Note: MS7505A2030 and MS7505A2130 are only available with NEMA 3R enclosure on 1/2" - 1-1/4" valves, for NEMA 2 use MS7103A2024 or MS7103A2224. MS7505A2030 and MS7505A2130 are available with or without NEMA 3R enclosure on 1-1/2" - 3" valves.

# PRODUCT SELECTION - VALVES

## 3-Way Control Ball Valves With Non Spring Return Actuators 1/2"-2 1/2"



Example of complete orderable part number: **VBN3A000.33PA+MVN613A0000+C1**  
 Control Ball Valve, Female NPT Thread, 3-way, 1-1/2", CV .33, Plated Brass trim, with MVN613A0000  
 Actuator, Fail in place and 1 meter cable.

**5-YEAR  
 LIMITED  
 WARRANTY**

Standard profile provides clearance between valve and actuator for insulation.  
 Low profile enables installation of valve and actuator in tight spaces.

If the complete orderable part number is too long for your ordering system,  
 please refer to the Short Order Codes on pg 12 to 33.

3-Way

Valve Specification		Valve Profile	Standard Profile	Low Profile	Black Bracket
Valve Size (inches)	Close-off (psi)	Valve Trim	Plated Brass	Stainless Steel	Plated Brass
		Cv	Valve Body Model Number		
1/2"	50	0.33	VBN3A000.33PA	VBN3A000.33PL	VBN3A000.33PX
		0.59	VBN3A000.59PA	VBN3A000.59PL	VBN3A000.59PX
		1.0	VBN3A001.00PA	VBN3A001.00PL	VBN3A001.00PX
		2.4	VBN3A002.40PA	VBN3A002.40PL	VBN3A002.40PX
		4.3	VBN3A004.30PA	VBN3A004.30PL	VBN3A004.30PX
3/4"	50	8.0	VBN3A008.00PA	VBN3A008.00PL	VBN3A008.00PX
		0.4	VBN3B000.40PA	VBN3B000.40PL	VBN3B000.40PX
		0.66	VBN3B000.66PA	VBN3B000.66PL	VBN3B000.66PX
		1.30	VBN3B001.30PA	VBN3B001.30PL	VBN3B001.30PX
		2.40	VBN3B002.40PA	VBN3B002.40PL	VBN3B002.40PX
		3.8	VBN3B003.80PA	VBN3B003.80PL	VBN3B003.80PX
		7.0	VBN3B007.00PA	VBN3B007.00PL	VBN3B007.00PX
1"	50	11.0	VBN3B011.00PA	VBN3B011.00PL	VBN3B011.00PX
		0.4	VBN3C000.40PA	VBN3C000.40PL	VBN3C000.40PX
		0.65	VBN3C000.65PA	VBN3C000.65PL	VBN3C000.65PX
		1.3	VBN3C001.30PA	VBN3C001.30PL	VBN3C001.30PX
		2.3	VBN3C002.30PA	VBN3C002.30PL	VBN3C002.30PX
		3.5	VBN3C003.50PA	VBN3C003.50PL	VBN3C003.50PX
		4.5	VBN3C004.50PA	VBN3C004.50PL	VBN3C004.50PX
		8.6	VBN3C008.60PA	VBN3C008.60PL	VBN3C008.60PX
		14.9	VBN3C014.90PA	VBN3C014.90PL	VBN3C014.90PX
		22	VBN3C022.00PA	VBN3C022.00PL	VBN3C022.00PX
1-1/4"	40	31	VBN3C031.00PA	VBN3C031.00PL	VBN3C031.00PX
		4.1	VBN3D004.10PA	VBN3D004.10PL	VBN3D004.10PX
		8.7	VBN3D008.70PA	VBN3D008.70PL	VBN3D008.70PX
		12.7	VBN3D012.70PA	VBN3D012.70PL	VBN3D012.70PX
		19.4	VBN3D019.40PA	VBN3D019.40PL	VBN3D019.40PX
1-1/2"	40	27	VBN3D027.00PA	VBN3D027.00PL	VBN3D027.00PX
		34	VBN3D034.00PA	VBN3D034.00PL	VBN3D034.00PX
		4			VBN3E004.00PX
		8.3			VBN3E008.30PX
		13.4			VBN3E013.40PX
		24			VBN3E024.00PX
2"	40	32			VBN3E032.00PX
		61			VBN3E061.00PX
		24		N/A	VBN3F024.00PX
		38		N/A	VBN3F038.00PX
		57		N/A	VBN3F057.00PX
2-1/2"	40	83			VBN3F083.00PX
		109			VBN3F109.00PX
		38			VBN3G038.00PX
		74			VBN3G074.00PX
		100			VBN3G100.00PX

Actuator Features				MVN Standard Profile	MVN Low Profile	DCA or DCA w/ switches
Control Signal	Timing	Voltage	Enclosure	Actuator Model Number		
Floating	90 sec.	24 VAC/DC*	NEMA 2	+MVN613A0000	+MVN613L0000	+MN6105A1011 or +MN6105A1201
Fast SPDT	30 sec.			+MVN643A0000	+MVN643L0000	
Modulating	90 sec.			+MVN713A0000	+MVN713L0000	+MN7505A2001 or +MN7505A2209
Accessories	1 meter cable			+C1		N/A
	NEMA 3R enclosure			N/A		+3R

\*MVN613 24 VAC only

# PRODUCT SELECTION - VALVES

## 3-Way Control Ball Valves With Spring Return Actuators 1/2"-2 1/2"



Example of complete orderable part number: **VBN3E032.00PX+MS8105A1030+FSC**  
 Control Ball Valve, Female NPT Thread, 3-way, 1-1/2", CV 32, Black Bracket, Plated Brass trim with MS8105A1030 Actuator, Fail closed.

**5-YEAR  
LIMITED  
WARRANTY**

If the complete orderable part number is too long for your ordering system, please refer to the Short Order Codes on pg 12 to 33.

3-Way

Valve Specification		Valve Profile	Black Bracket	
Valve Size (inches)	Close-off (psi)	Valve Trim	Plated Brass	Plated Brass
		Cv	Valve Body Model Number	
1/2"	50	0.33	VBN3A000.33PX	VBN3A000.33PX
		0.59	VBN3A000.59PX	VBN3A000.59PX
		1.0	VBN3A001.00PX	VBN3A001.00PX
		2.4	VBN3A002.40PX	VBN3A002.40PX
		4.3	VBN3A004.30PX	VBN3A004.30PX
		8.0	VBN3A008.00PX	VBN3A008.00PX
3/4"	50	0.4	VBN3B000.40PX	VBN3B000.40PX
		0.66	VBN3B000.66PX	VBN3B000.66PX
		1.30	VBN3B001.30PX	VBN3B001.30PX
		2.40	VBN3B002.40PX	VBN3B002.40PX
		3.8	VBN3B003.80PX	VBN3B003.80PX
		7.0	VBN3B007.00PX	VBN3B007.00PX
1"	50	11.0	VBN3B011.00PX	VBN3B011.00PX
		0.4	VBN3C000.40PX	VBN3C000.40PX
		0.65	VBN3C000.65PX	VBN3C000.65PX
		1.3	VBN3C001.30PX	VBN3C001.30PX
		2.3	VBN3C002.30PX	VBN3C002.30PX
		3.5	VBN3C003.50PX	VBN3C003.50PX
		4.5	VBN3C004.50PX	VBN3C004.50PX
		8.6	VBN3C008.60PX	VBN3C008.60PX
		14.9	VBN3C014.90PX	VBN3C014.90PX
		22	VBN3C022.00PX	VBN3C022.00PX
1-1/4"	40	31	VBN3C031.00PX	VBN3C031.00PX
		4.1	VBN3D004.10PX	VBN3D004.10PX
		8.7	VBN3D008.70PX	VBN3D008.70PX
		12.7	VBN3D012.70PX	VBN3D012.70PX
		19.4	VBN3D019.40PX	VBN3D019.40PX
		27	VBN3D027.00PX	VBN3D027.00PX
1-1/2"	40	34	VBN3D034.00PX	VBN3D034.00PX
		4	VBN3E004.00PX	VBN3E004.00PX
		8.3	VBN3E008.30PX	VBN3E008.30PX
		13.4	VBN3E013.40PX	VBN3E013.40PX
		24	VBN3E024.00PX	VBN3E024.00PX
		32	VBN3E032.00PX	VBN3E032.00PX
2"	40	61	VBN3E061.00PX	VBN3E061.00PX
		24	VBN3F024.00PX	VBN3F024.00PX
		38	VBN3F038.00PX	VBN3F038.00PX
		57	VBN3F057.00PX	VBN3F057.00PX
		83	VBN3F083.00PX	VBN3F083.00PX
2-1/2"	40	109	VBN3F109.00PX	VBN3F109.00PX
		38	VBN3G038.00PX	VBN3G038.00PX
		74	VBN3G074.00PX	VBN3G074.00PX
		100	VBN3G100.00PX	VBN3G100.00PX

### Actuator Features


Control Signal	Timing	Voltage	Enclosure	DCA or DCA w/ switches	DCA or DCA w/ switches
Modulating	90 sec.	24 VAC/DC	NEMA 2	Actuator Model Number	
Sytk	30-180 sec.			+MS7103A2024 or +MS7103A2224	+MS7505A2030 or +MS7505A2130
2-position	45 sec.	120 VAC	NEMA 3R enclosure	Actuator Model Number	
2-position	45 sec.			+MS3103J1023 or +MS3103J1223	+MS8105A1030 or +MS8105A1130
Fail Safe Position	FSO - Fail Safe Open, FSC - Fail Safe Closed			+FSO or +FSC	+FSO or +FSC
Accessories				N/A	+3R

Note: MS7505A2030 and MS7505A2130 are only available with NEMA 3R enclosure on 1/2" - 1-1/4" valves, for NEMA 2 use MS7103A2024 or MS7103A2224. MS7505A2030 and MS7505A2130 are available with or without NEMA 3R enclosure on 1-1/2" - 3" valves.

# PRODUCT SELECTION - VALVES

MVN Actuator With Standard Profile, 2-Way NPT Valves 1/2"-1 1/4"

**5-YEAR  
LIMITED  
WARRANTY**

Actuator Features		Non Fail Safe				Valve Only		
Actuator O.S Number/ Short Order Code		MVN613A0000		MVN613A0000+C1		N/A		
Power Supply	Voltage	24 VAC		24 VAC				
	Frequency	50/60 Hz		50/60 Hz				
	Power	1.5 VA		1.5 VA				
Actuator Torque	(lb.-in.)	27		27				
Control	Modulating (0)2-10Vdc							
	Floating	•		•				
	Fast acting SPDT							
Actuator Stroke (degrees)		90° ± 3°		90° ± 3°				
Timing (seconds)		90		90				
Fail Safe Action		Fail in Place		Fail in Place				
Valve Features		Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel

Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes					
			No Cable		1 Meter Cable		Valve Only	
1/2"	130	0.38	VBN2ABPA1000	VBN2ABSA1000	VBN2ABPA1001	VBN2ABSA1001	VBN2ABPA0000	VBN2ABSA0000
		0.68	VBN2ADPA1000	VBN2ADSA1000	VBN2ADPA1001	VBN2ADSA1001	VBN2ADPA0000	VBN2ADSA0000
		1.3	VBN2AEPa1000	VBN2AESa1000	VBN2AEPa1001	VBN2AESa1001	VBN2AEPa0000	VBN2AESa0000
		2	VBN2AFPA1000	VBN2AFSA1000	VBN2AFPA1001	VBN2AFSA1001	VBN2AFPA0000	VBN2AFSA0000
		2.6	VBN2AGPA1000	VBN2AGSA1000	VBN2AGPA1001	VBN2AGSA1001	VBN2AGPA0000	VBN2AGSA0000
		4.7	VBN2AHPa1000	VBN2AHSa1000	VBN2AHPa1001	VBN2AHSa1001	VBN2AHPa0000	VBN2AHSa0000
		8	VBN2AJPA1000	VBN2AJSA1000	VBN2AJPA1001	VBN2AJSA1001	VBN2AJPA0000	VBN2AJSA0000
		11.7*	VBN2AKPA1000	VBN2AKSA1000	VBN2AKPA1001	VBN2AKSA1001	VBN2AKPA0000	VBN2AKSA0000
3/4"	130	0.31	VBN2BBPA1000	VBN2BBSa1000	VBN2BBPA1001	VBN2BBSa1001	VBN2BBPA0000	VBN2BBSa0000
		0.63	VBN2BDPA1000	VBN2BDSa1000	VBN2BDPA1001	VBN2BDSa1001	VBN2BDPA0000	VBN2BDSa0000
		1.2	VBN2BEPa1000	VBN2BESa1000	VBN2BEPa1001	VBN2BESa1001	VBN2BEPa0000	VBN2BESa0000
		2.5	VBN2BGPA1000	VBN2BGSa1000	VBN2BGPA1001	VBN2BGSa1001	VBN2BGPA0000	VBN2BGSa0000
		4.3	VBN2BHPa1000	VBN2BHSa1000	VBN2BHPa1001	VBN2BHSa1001	VBN2BHPa0000	VBN2BHSa0000
		7.4	VBN2BJPA1000	VBN2BJSa1000	VBN2BJPA1001	VBN2BJSa1001	VBN2BJPA0000	VBN2BJSa0000
		10.1	VBN2BKPA1000	VBN2BKSA1000	VBN2BKPA1001	VBN2BKSA1001	VBN2BKPA0000	VBN2BKSA0000
		14.7*	VBN2BLPA1000	VBN2BLSa1000	VBN2BLPA1001	VBN2BLSa1001	VBN2BLPA0000	VBN2BLSa0000
29*	VBN2BMPa1000	VBN2BMSa1000	VBN2BMPa1001	VBN2BMSa1001	VBN2BMPa0000	VBN2BMSa0000		
1"	100	4.4	VBN2CHPA1000	VBN2CHSA1000	VBN2CHPA1001	VBN2CHSA1001	VBN2CHPA0000	VBN2CHSA0000
		9	VBN2CJPA1000	VBN2CJSa1000	VBN2CJPA1001	VBN2CJSa1001	VBN2CJPA0000	VBN2CJSa0000
		15.3	VBN2CLPA1000	VBN2CLSA1000	VBN2CLPA1001	VBN2CLSA1001	VBN2CLPA0000	VBN2CLSA0000
		26	VBN2CMPa1000	VBN2CMSa1000	VBN2CMPa1001	VBN2CMSa1001	VBN2CMPa0000	VBN2CMSa0000
		44*	VBN2CNPA1000	VBN2CNSa1000	VBN2CNPA1001	VBN2CNSa1001	VBN2CNPA0000	VBN2CNSa0000
		54*	VBN2CPPa1000	VBN2CPSa1000	VBN2CPPa1001	VBN2CPSa1001	VBN2CPPa0000	VBN2CPSa0000
1-1/4"	100	4.4	VBN2DHPa1000	VBN2DHSa1000	VBN2DHPa1001	VBN2DHSa1001	VBN2DHPa0000	VBN2DHSa0000
		8.3	VBN2DJPA1000	VBN2DJSa1000	VBN2DJPA1001	VBN2DJSa1001	VBN2DJPA0000	VBN2DJSa0000
		14.9	VBN2DKPA1000	VBN2DKSA1000	VBN2DKPA1001	VBN2DKSA1001	VBN2DKPA0000	VBN2DKSA0000
		25	VBN2DLPa1000	VBN2DLSa1000	VBN2DLPa1001	VBN2DLSa1001	VBN2DLPa0000	VBN2DLSa0000
		37	VBN2DMPa1000	VBN2DMSa1000	VBN2DMPa1001	VBN2DMSa1001	VBN2DMPa0000	VBN2DMSa0000
		41*	VBN2DNPA1000	VBN2DNSa1000	VBN2DNPA1001	VBN2DNSa1001	VBN2DNPA0000	VBN2DNSa0000
		102*	VBN2DSPa1000	VBN2DSSa1000	VBN2DSPa1001	VBN2DSSa1001	VBN2DSPa0000	VBN2DSSa0000



2-Way

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## MVN Actuator With Standard Profile 2-Way NPT Valves 1/2"-1 1/4"


Actuator Features		Non Fail Safe							
Actuator O.S Number/ Short Order Code		MVN643A0000		MVN643A0000+C1		MVN713A0000		MVN713A0000+C1	
Power Supply	Voltage	24 VAC/DC		24 VAC/DC		24 VAC/DC		24 VAC/DC	
	Frequency	50/60 Hz		50/60 Hz		50/60 Hz		50/60 Hz	
	Power	6 VA		6 VA		5 VA		5 VA	
Actuator Torque	(lb.-in.)	27		27		27		27	
Control	Modulating (0)2-10Vdc					•		•	
	Floating								
	Fast acting SPDT	•		•					
Actuator Stroke (degrees)		90° ± 3°		90° ± 3°		90° ± 3°		90° ± 3°	
Timing	(seconds)	30		30		90		90	
Fail Safe Action		Fail in Place		Fail in Place		Fail in Place		Fail in Place	
Valve Features	Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel

Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes							
			No Cable		1 Meter Cable		No Cable		1 Meter Cable	
1/2"	130	0.38	VBN2ABPA2000	VBN2ABSA2000	VBN2ABPA2001	VBN2ABSA2001	VBN2ABPA3000	VBN2ABSA3000	VBN2ABPA3001	VBN2ABSA3001
		0.68	VBN2ADPA2000	VBN2ADSA2000	VBN2ADPA2001	VBN2ADSA2001	VBN2ADPA3000	VBN2ADSA3000	VBN2ADPA3001	VBN2ADSA3001
		1.3	VBN2AEP2000	VBN2AESA2000	VBN2AEP2001	VBN2AESA2001	VBN2AEP3000	VBN2AESA3000	VBN2AEP3001	VBN2AESA3001
		2	VBN2AFPA2000	VBN2AFSA2000	VBN2AFPA2001	VBN2AFSA2001	VBN2AFPA3000	VBN2AFSA3000	VBN2AFPA3001	VBN2AFSA3001
		2.6	VBN2AGPA2000	VBN2AGSA2000	VBN2AGPA2001	VBN2AGSA2001	VBN2AGPA3000	VBN2AGSA3000	VBN2AGPA3001	VBN2AGSA3001
		4.7	VBN2AHPA2000	VBN2AHPA2000	VBN2AHPA2001	VBN2AHPA2001	VBN2AHPA3000	VBN2AHPA3000	VBN2AHPA3001	VBN2AHPA3001
		8	VBN2AJPA2000	VBN2AJSA2000	VBN2AJPA2001	VBN2AJSA2001	VBN2AJPA3000	VBN2AJSA3000	VBN2AJPA3001	VBN2AJSA3001
		11.7*	VBN2AKPA2000	VBN2AKSA2000	VBN2AKPA2001	VBN2AKSA2001	VBN2AKPA3000	VBN2AKSA3000	VBN2AKPA3001	VBN2AKSA3001
3/4"	130	0.31	VBN2BBPA2000	VBN2BBSA2000	VBN2BBPA2001	VBN2BBSA2001	VBN2BBPA3000	VBN2BBSA3000	VBN2BBPA3001	VBN2BBSA3001
		0.63	VBN2BDPA2000	VBN2BDSA2000	VBN2BDPA2001	VBN2BDSA2001	VBN2BDPA3000	VBN2BDSA3000	VBN2BDPA3001	VBN2BDSA3001
		1.2	VBN2BEP2000	VBN2BESA2000	VBN2BEP2001	VBN2BESA2001	VBN2BEP3000	VBN2BESA3000	VBN2BEP3001	VBN2BESA3001
		2.5	VBN2BGPA2000	VBN2BGS2000	VBN2BGPA2001	VBN2BGS2001	VBN2BGPA3000	VBN2BGS2000	VBN2BGPA3001	VBN2BGS2001
		4.3	VBN2BHPA2000	VBN2BHSA2000	VBN2BHPA2001	VBN2BHSA2001	VBN2BHPA3000	VBN2BHSA3000	VBN2BHPA3001	VBN2BHSA3001
		7.4	VBN2BJPA2000	VBN2BJS2000	VBN2BJPA2001	VBN2BJS2001	VBN2BJPA3000	VBN2BJS2000	VBN2BJPA3001	VBN2BJS2001
		10.1	VBN2BKPA2000	VBN2BKSA2000	VBN2BKPA2001	VBN2BKSA2001	VBN2BKPA3000	VBN2BKSA3000	VBN2BKPA3001	VBN2BKSA3001
		14.7*	VBN2BLPA2000	VBN2BLSA2000	VBN2BLPA2001	VBN2BLSA2001	VBN2BLPA3000	VBN2BLSA3000	VBN2BLPA3001	VBN2BLSA3001
29*	VBN2BMPA2000	VBN2BMSA2000	VBN2BMPA2001	VBN2BMSA2001	VBN2BMPA3000	VBN2BMSA3000	VBN2BMPA3001	VBN2BMSA3001		
1"	100	4.4	VBN2CHPA2000	VBN2CHSA2000	VBN2CHPA2001	VBN2CHSA2001	VBN2CHPA3000	VBN2CHSA3000	VBN2CHPA3001	VBN2CHSA3001
		9	VBN2CJPA2000	VBN2CJSA2000	VBN2CJPA2001	VBN2CJSA2001	VBN2CJPA3000	VBN2CJSA3000	VBN2CJPA3001	VBN2CJSA3001
		15.3	VBN2CLPA2000	VBN2CLSA2000	VBN2CLPA2001	VBN2CLSA2001	VBN2CLPA3000	VBN2CLSA3000	VBN2CLPA3001	VBN2CLSA3001
		26	VBN2CMPA2000	VBN2CMSA2000	VBN2CMPA2001	VBN2CMSA2001	VBN2CMPA3000	VBN2CMSA3000	VBN2CMPA3001	VBN2CMSA3001
		44*	VBN2CNPA2000	VBN2CNSA2000	VBN2CNPA2001	VBN2CNSA2001	VBN2CNPA3000	VBN2CNSA3000	VBN2CNPA3001	VBN2CNSA3001
		54*	VBN2CPPA2000	VBN2CPSA2000	VBN2CPPA2001	VBN2CPSA2001	VBN2CPPA3000	VBN2CPSA3000	VBN2CPPA3001	VBN2CPSA3001
1-1/4"	100	4.4	VBN2DHPA2000	VBN2DHPA2000	VBN2DHPA2001	VBN2DHPA2001	VBN2DHPA3000	VBN2DHPA3000	VBN2DHPA3001	VBN2DHPA3001
		8.3	VBN2DJPA2000	VBN2DJS2000	VBN2DJPA2001	VBN2DJS2001	VBN2DJPA3000	VBN2DJS2000	VBN2DJPA3001	VBN2DJS2001
		14.9	VBN2DKPA2000	VBN2DKSA2000	VBN2DKPA2001	VBN2DKSA2001	VBN2DKPA3000	VBN2DKSA3000	VBN2DKPA3001	VBN2DKSA3001
		25	VBN2DLPA2000	VBN2DLSA2000	VBN2DLPA2001	VBN2DLSA2001	VBN2DLPA3000	VBN2DLSA3000	VBN2DLPA3001	VBN2DLSA3001
		37	VBN2DMPA2000	VBN2DMSA2000	VBN2DMPA2001	VBN2DMSA2001	VBN2DMPA3000	VBN2DMSA3000	VBN2DMPA3001	VBN2DMSA3001
		41*	VBN2DNPA2000	VBN2DNSA2000	VBN2DNPA2001	VBN2DNSA2001	VBN2DNPA3000	VBN2DNSA3000	VBN2DNPA3001	VBN2DNSA3001
		102*	VBN2DSPA2000	VBN2DSSA2000	VBN2DSPA2001	VBN2DSSA2001	VBN2DSPA3000	VBN2DSSA3000	VBN2DSPA3001	VBN2DSSA3001

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

MVN Actuator With Low Profile 2-Way NPT Valves 1/2"-1 1/4"

Actuator Features		Non Fail Safe				Valve Only		
Actuator O.S Number/ Short Order Code		MVN613L0000		MVN613L0000		N/A		
Power Supply	Voltage	24 Vac		24 Vac				
	Frequency	50/60 Hz		50/60 Hz				
	Power	1.5 VA		1.5 VA				
Actuator Torque	(lb.-in.)	27		27				
Control	Modulating (0)2-10Vdc							
	Floating	•		•				
	Fast acting SPDT							
Actuator Stroke (degrees)		90° ± 3°		90 ± 3				
Timing (seconds)		90		90				
Fail Safe Action		Fail in Place		Fail in Place				
Valve Features		Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel

Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes					
			No Cable		1 Meter Cable		Valve Only	
1/2"	130	0.38	VBN2ABPL1000	VBN2ABSL1000	VBN2ABPL1001	VBN2ABSL1001	VBN2ABPL0000	VBN2ABSL0000
		0.68	VBN2ADPL1000	VBN2ADSL1000	VBN2ADPL1001	VBN2ADSL1001	VBN2ADPL0000	VBN2ADSL0000
		1.3	VBN2AEPL1000	VBN2AESL1000	VBN2AEPL1001	VBN2AESL1001	VBN2AEPL0000	VBN2AESL0000
		2	VBN2AFPL1000	VBN2AFSL1000	VBN2AFPL1001	VBN2AFSL1001	VBN2AFPL0000	VBN2AFSL0000
		2.6	VBN2AGPL1000	VBN2AGSL1000	VBN2AGPL1001	VBN2AGSL1001	VBN2AGPL0000	VBN2AGSL0000
		4.7	VBN2AHPL1000	VBN2AHS�1000	VBN2AHPL1001	VBN2AHS�1001	VBN2AHPL0000	VBN2AHS�0000
		8	VBN2AJPL1000	VBN2AJSL1000	VBN2AJPL1001	VBN2AJSL1001	VBN2AJPL0000	VBN2AJSL0000
		11.7*	VBN2AKPL1000	VBN2AKSL1000	VBN2AKPL1001	VBN2AKSL1001	VBN2AKPL0000	VBN2AKSL0000
3/4"	130	0.31	VBN2BBPL1000	VBN2BBSL1000	VBN2BBPL1001	VBN2BBSL1001	VBN2BBPL0000	VBN2BBSL0000
		0.63	VBN2BDPL1000	VBN2BDSL1000	VBN2BDPL1001	VBN2BDSL1001	VBN2BDPL0000	VBN2BDSL0000
		1.2	VBN2BEPL1000	VBN2BESL1000	VBN2BEPL1001	VBN2BESL1001	VBN2BEPL0000	VBN2BESL0000
		2.5	VBN2BGPL1000	VBN2BGS�1000	VBN2BGPL1001	VBN2BGS�1001	VBN2BGPL0000	VBN2BGS�0000
		4.3	VBN2BHPL1000	VBN2BHSL1000	VBN2BHPL1001	VBN2BHSL1001	VBN2BHPL0000	VBN2BHSL0000
		7.4	VBN2BJPL1000	VBN2BJS�1000	VBN2BJPL1001	VBN2BJS�1001	VBN2BJPL0000	VBN2BJS�0000
		10.1	VBN2BKPL1000	VBN2BKSL1000	VBN2BKPL1001	VBN2BKSL1001	VBN2BKPL0000	VBN2BKSL0000
		14.7*	VBN2BLPL1000	VBN2BLSL1000	VBN2BLPL1001	VBN2BLSL1001	VBN2BLPL0000	VBN2BLSL0000
29*	VBN2BMPL1000	VBN2BMSL1000	VBN2BMPL1001	VBN2BMSL1001	VBN2BMPL0000	VBN2BMSL0000		
1"	100	4.4	VBN2CHPL1000	VBN2CHSL1000	VBN2CHPL1001	VBN2CHSL1001	VBN2CHPL0000	VBN2CHSL0000
		9	VBN2CJPL1000	VBN2CJS�1000	VBN2CJPL1001	VBN2CJS�1001	VBN2CJPL0000	VBN2CJS�0000
		15.3	VBN2CLPL1000	VBN2CLS�1000	VBN2CLPL1001	VBN2CLS�1001	VBN2CLPL0000	VBN2CLS�0000
		26	VBN2CMPL1000	VBN2CMSL1000	VBN2CMPL1001	VBN2CMSL1001	VBN2CMPL0000	VBN2CMSL0000
		44*	VBN2CNPL1000	VBN2CNSL1000	VBN2CNPL1001	VBN2CNSL1001	VBN2CNPL0000	VBN2CNSL0000
		54*	VBN2CPPL1000	VBN2CPSL1000	VBN2CPPL1001	VBN2CPSL1001	VBN2CPPL0000	VBN2CPSL0000
1-1/4"	100	4.4	VBN2DHPL1000	VBN2DHSL1000	VBN2DHPL1001	VBN2DHSL1001	VBN2DHPL0000	VBN2DHSL0000
		8.3	VBN2DJPL1000	VBN2DJS�1000	VBN2DJPL1001	VBN2DJS�1001	VBN2DJPL0000	VBN2DJS�0000
		14.9	VBN2DKPL1000	VBN2DKSL1000	VBN2DKPL1001	VBN2DKSL1001	VBN2DKPL0000	VBN2DKSL0000
		25	VBN2DLPL1000	VBN2DLSL1000	VBN2DLPL1001	VBN2DLSL1001	VBN2DLPL0000	VBN2DLSL0000
		37	VBN2DMPL1000	VBN2DMSL1000	VBN2DMPL1001	VBN2DMSL1001	VBN2DMPL0000	VBN2DMSL0000
		41*	VBN2DNPL1000	VBN2DNSL1000	VBN2DNPL1001	VBN2DNSL1001	VBN2DNPL0000	VBN2DNSL0000
		102*	VBN2DSPL1000	VBN2DSSL1000	VBN2DSPL1001	VBN2DSSL1001	VBN2DSPL0000	VBN2DSSL0000



2-Way

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## MVN Actuator With Low Profile 2-Way NPT Valves 1/2"-1 1/4"


Actuator Features		Non Fail Safe								
Actuator O.S Number/ Short Order Code		MVN643L0000		MVN643L0000+C1		MVN713L0000		MVN713L0000+C1		
Power Supply	Voltage	24 VAC/DC		24 VAC/DC		24 VAC/DC		24 VAC/DC		
	Frequency	50/60 Hz		50/60 Hz		50/60 Hz		50/60 Hz		
	Power	6 VA		6 VA		5 VA		5 VA		
Actuator Torque (lb.-in.)		27		27		27		27		
Control	Modulating (0)2-10Vdc					•		•		
	Floating									
	Fast acting SPDT	•		•						
Actuator Stroke (degrees)		90° ± 3°		90° ± 3°		90° ± 3°		90° ± 3°		
Timing (seconds)		30		30		90		90		
Fail Safe Action		Fail in Place		Fail in Place		Fail in Place		Fail in Place		
Valve Features		Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel

Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes							
			No Cable		1 Meter Cable		No Cable		1 Meter Cable	
1/2"	130	0.38	VBN2ABPL2000	VBN2ABSL2000	VBN2ABPL2001	VBN2ABSL2001	VBN2ABPL3000	VBN2ABSL3000	VBN2ABPL3001	VBN2ABSL3001
		0.68	VBN2ADPL2000	VBN2ADSL2000	VBN2ADPL2001	VBN2ADSL2001	VBN2ADPL3000	VBN2ADSL3000	VBN2ADPL3001	VBN2ADSL3001
		1.3	VBN2AEPL2000	VBN2AESL2000	VBN2AEPL2001	VBN2AESL2001	VBN2AEPL3000	VBN2AESL3000	VBN2AEPL3001	VBN2AESL3001
		2	VBN2AFPL2000	VBN2AFSL2000	VBN2AFPL2001	VBN2AFSL2001	VBN2AFPL3000	VBN2AFSL3000	VBN2AFPL3001	VBN2AFSL3001
		2.6	VBN2AGPL2000	VBN2AGSL2000	VBN2AGPL2001	VBN2AGSL2001	VBN2AGPL3000	VBN2AGSL3000	VBN2AGPL3001	VBN2AGSL3001
		4.7	VBN2AHPL2000	VBN2AHSL2000	VBN2AHPL2001	VBN2AHSL2001	VBN2AHPL3000	VBN2AHSL3000	VBN2AHPL3001	VBN2AHSL3001
		8	VBN2AJPL2000	VBN2AJSL2000	VBN2AJPL2001	VBN2AJSL2001	VBN2AJPL3000	VBN2AJSL3000	VBN2AJPL3001	VBN2AJSL3001
		11.7*	VBN2AKPL2000	VBN2AKSL2000	VBN2AKPL2001	VBN2AKSL2001	VBN2AKPL3000	VBN2AKSL3000	VBN2AKPL3001	VBN2AKSL3001
3/4"	130	0.31	VBN2BBPL2000	VBN2BBSL2000	VBN2BBPL2001	VBN2BBSL2001	VBN2BBPL3000	VBN2BBSL3000	VBN2BBPL3001	VBN2BBSL3001
		0.63	VBN2BDPL2000	VBN2BDSL2000	VBN2BDPL2001	VBN2BDSL2001	VBN2BDPL3000	VBN2BDSL3000	VBN2BDPL3001	VBN2BDSL3001
		1.2	VBN2BEPL2000	VBN2BESL2000	VBN2BEPL2001	VBN2BESL2001	VBN2BEPL3000	VBN2BESL3000	VBN2BEPL3001	VBN2BESL3001
		2.5	VBN2BGPL2000	VBN2BGSL2000	VBN2BGPL2001	VBN2BGSL2001	VBN2BGPL3000	VBN2BGSL3000	VBN2BGPL3001	VBN2BGSL3001
		4.3	VBN2BHPL2000	VBN2BHSL2000	VBN2BHPL2001	VBN2BHSL2001	VBN2BHPL3000	VBN2BHSL3000	VBN2BHPL3001	VBN2BHSL3001
		7.4	VBN2BJPL2000	VBN2BJSL2000	VBN2BJPL2001	VBN2BJSL2001	VBN2BJPL3000	VBN2BJSL3000	VBN2BJPL3001	VBN2BJSL3001
		10.1	VBN2BKPL2000	VBN2BKSL2000	VBN2BKPL2001	VBN2BKSL2001	VBN2BKPL3000	VBN2BKSL3000	VBN2BKPL3001	VBN2BKSL3001
		14.7*	VBN2BLPL2000	VBN2BLSL2000	VBN2BLPL2001	VBN2BLSL2001	VBN2BLPL3000	VBN2BLSL3000	VBN2BLPL3001	VBN2BLSL3001
29*	VBN2BMPL2000	VBN2BMSL2000	VBN2BMPL2001	VBN2BMSL2001	VBN2BMPL3000	VBN2BMSL3000	VBN2BMPL3001	VBN2BMSL3001		
1"	100	4.4	VBN2CHPL2000	VBN2CHSL2000	VBN2CHPL2001	VBN2CHSL2001	VBN2CHPL3000	VBN2CHSL3000	VBN2CHPL3001	VBN2CHSL3001
		9	VBN2CJPL2000	VBN2CJSL2000	VBN2CJPL2001	VBN2CJSL2001	VBN2CJPL3000	VBN2CJSL3000	VBN2CJPL3001	VBN2CJSL3001
		15.3	VBN2CLPL2000	VBN2CLSL2000	VBN2CLPL2001	VBN2CLSL2001	VBN2CLPL3000	VBN2CLSL3000	VBN2CLPL3001	VBN2CLSL3001
		26	VBN2CMPL2000	VBN2CMSL2000	VBN2CMPL2001	VBN2CMSL2001	VBN2CMPL3000	VBN2CMSL3000	VBN2CMPL3001	VBN2CMSL3001
		44*	VBN2CNPL2000	VBN2CNLSL2000	VBN2CNPL2001	VBN2CNLSL2001	VBN2CNPL3000	VBN2CNLSL3000	VBN2CNPL3001	VBN2CNLSL3001
		54*	VBN2CPPL2000	VBN2CPSL2000	VBN2CPPL2001	VBN2CPSL2001	VBN2CPPL3000	VBN2CPSL3000	VBN2CPPL3001	VBN2CPSL3001
1-1/4"	100	4.4	VBN2DHPL2000	VBN2DHSL2000	VBN2DHPL2001	VBN2DHSL2001	VBN2DHPL3000	VBN2DHSL3000	VBN2DHPL3001	VBN2DHSL3001
		8.3	VBN2DJPL2000	VBN2DJSL2000	VBN2DJPL2001	VBN2DJSL2001	VBN2DJPL3000	VBN2DJSL3000	VBN2DJPL3001	VBN2DJSL3001
		14.9	VBN2DKPL2000	VBN2DKSL2000	VBN2DKPL2001	VBN2DKSL2001	VBN2DKPL3000	VBN2DKSL3000	VBN2DKPL3001	VBN2DKSL3001
		25	VBN2DLPL2000	VBN2DLSL2000	VBN2DLPL2001	VBN2DLSL2001	VBN2DLPL3000	VBN2DLSL3000	VBN2DLPL3001	VBN2DLSL3001
		37	VBN2DMPL2000	VBN2DMSL2000	VBN2DMPL2001	VBN2DMSL2001	VBN2DMPL3000	VBN2DMSL3000	VBN2DMPL3001	VBN2DMSL3001
		41*	VBN2DNPL2000	VBN2DNSL2000	VBN2DNPL2001	VBN2DNSL2001	VBN2DNPL3000	VBN2DNSL3000	VBN2DNPL3001	VBN2DNSL3001
		102*	VBN2DSPL2000	VBN2DSSL2000	VBN2DSPL2001	VBN2DSSL2001	VBN2DSPL3000	VBN2DSSL3000	VBN2DSPL3001	VBN2DSSL3001

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

MVN Actuator With Standard Profile 3-Way NPT Valves 1/2"-1 1/4"

Actuator Features		Non Fail Safe						Valve Only
Actuator O.S Number/ Short Order Code		MVN613A0000	MVN613A0000+C1	MVN643A0000	MVN643A0000+C1	MVN713A0000	MVN713A0000+C1	N/A
Power Supply	Voltage	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac	
	Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	
	Power	1.5 VA	1.5 VA	6 VA	6 VA	5 VA	5 VA	
Actuator Torque	(lb.-in.)	27	27	27	27	27	27	
Control	Modulating (0)2-10Vdc					•	•	
	Floating	•	•					
	Fast acting SPDT			•	•			
Actuator Stroke (degrees)		90 ±3	90 ±3	90 ±3	90 ±3	90 ±3	90 ±3	
Timing	(seconds)	90	90	30	30	90	90	
Fail Safe Action		Fail in Place	Fail in Place	Fail in Place	Fail in Place	Fail in Place	Fail in Place	
Valve Features	Trim	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass

Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes						Valve Only
			No Cable	1 Meter Cable	No Cable	1 Meter Cable	No Cable	1 Meter Cable	
1/2"	50	0.33	VBN3ABPA1000	VBN3ABPA1001	VBN3ABPA2000	VBN3ABPA2001	VBN3ABPA3000	VBN3ABPA3001	VBN3ABPA0000
		0.59	VBN3ACPA1000	VBN3ACPA1001	VBN3ACPA2000	VBN3ACPA2001	VBN3ACPA3000	VBN3ACPA3001	VBN3ACPA0000
		1	VBN3AEP A1000	VBN3AEP A1001	VBN3AEP A2000	VBN3AEP A2001	VBN3AEP A3000	VBN3AEP A3001	VBN3AEP A0000
		2.4	VBN3AFP A1000	VBN3AFP A1001	VBN3AFP A2000	VBN3AFP A2001	VBN3AFP A3000	VBN3AFP A3001	VBN3AFP A0000
		4.3	VBN3AHP A1000	VBN3AHP A1001	VBN3AHP A2000	VBN3AHP A2001	VBN3AHP A3000	VBN3AHP A3001	VBN3AHP A0000
		8*	VBN3AJPA1000	VBN3AJPA1001	VBN3AJPA2000	VBN3AJPA2001	VBN3AJPA3000	VBN3AJPA3001	VBN3AJPA0000
3/4"	50	0.4	VBN3BCPA1000	VBN3BCPA1001	VBN3BCPA2000	VBN3BCPA2001	VBN3BCPA3000	VBN3BCPA3001	VBN3BCPA0000
		0.66	VBN3BDPA1000	VBN3BDPA1001	VBN3BDPA2000	VBN3BDPA2001	VBN3BDPA3000	VBN3BDPA3001	VBN3BDPA0000
		1.3	VBN3BEP A1000	VBN3BEP A1001	VBN3BEP A2000	VBN3BEP A2001	VBN3BEP A3000	VBN3BEP A3001	VBN3BEP A0000
		2.4	VBN3BFPA1000	VBN3BFPA1001	VBN3BFPA2000	VBN3BFPA2001	VBN3BFPA3000	VBN3BFPA3001	VBN3BFPA0000
		3.8	VBN3BGPA1000	VBN3BGPA1001	VBN3BGPA2000	VBN3BGPA2001	VBN3BGPA3000	VBN3BGPA3001	VBN3BGPA0000
		7	VBN3BJPA1000	VBN3BJPA1001	VBN3BJPA2000	VBN3BJPA2001	VBN3BJPA3000	VBN3BJPA3001	VBN3BJPA0000
1"	50	11*	VBN3BKPA1000	VBN3BKPA1001	VBN3BKPA2000	VBN3BKPA2001	VBN3BKPA3000	VBN3BKPA3001	VBN3BKPA0000
		0.4	VBN3CCPA1000	VBN3CCPA1001	VBN3CCPA2000	VBN3CCPA2001	VBN3CCPA3000	VBN3CCPA3001	VBN3CCPA0000
		0.65	VBN3CDPA1000	VBN3CDPA1001	VBN3CDPA2000	VBN3CDPA2001	VBN3CDPA3000	VBN3CDPA3001	VBN3CDPA0000
		1.3	VBN3CEPA1000	VBN3CEPA1001	VBN3CEPA2000	VBN3CEPA2001	VBN3CEPA3000	VBN3CEPA3001	VBN3CEPA0000
		2.3	VBN3CFPA1000	VBN3CFPA1001	VBN3CFPA2000	VBN3CFPA2001	VBN3CFPA3000	VBN3CFPA3001	VBN3CFPA0000
		3.5	VBN3CGPA1000	VBN3CGPA1001	VBN3CGPA2000	VBN3CGPA2001	VBN3CGPA3000	VBN3CGPA3001	VBN3CGPA0000
		4.5	VBN3CHPA1000	VBN3CHPA1001	VBN3CHPA2000	VBN3CHPA2001	VBN3CHPA3000	VBN3CHPA3001	VBN3CHPA0000
		8.6	VBN3CJPA1000	VBN3CJPA1001	VBN3CJPA2000	VBN3CJPA2001	VBN3CJPA3000	VBN3CJPA3001	VBN3CJPA0000
		14.9	VBN3CKPA1000	VBN3CKPA1001	VBN3CKPA2000	VBN3CKPA2001	VBN3CKPA3000	VBN3CKPA3001	VBN3CKPA0000
22*	VBN3CLPA1000	VBN3CLPA1001	VBN3CLPA2000	VBN3CLPA2001	VBN3CLPA3000	VBN3CLPA3001	VBN3CLPA0000		
1-1/4"	40	31*	VBN3CMP A1000	VBN3CMP A1001	VBN3CMP A2000	VBN3CMP A2001	VBN3CMP A3000	VBN3CMP A3001	VBN3CMP A0000
		4.1	VBN3DHPA1000	VBN3DHPA1001	VBN3DHPA2000	VBN3DHPA2001	VBN3DHPA3000	VBN3DHPA3001	VBN3DHPA0000
		8.7	VBN3DJPA1000	VBN3DJPA1001	VBN3DJPA2000	VBN3DJPA2001	VBN3DJPA3000	VBN3DJPA3001	VBN3DJPA0000
		12.7	VBN3DKPA1000	VBN3DKPA1001	VBN3DKPA2000	VBN3DKPA2001	VBN3DKPA3000	VBN3DKPA3001	VBN3DKPA0000
		19.4*	VBN3DLP A1000	VBN3DLP A1001	VBN3DLP A2000	VBN3DLP A2001	VBN3DLP A3000	VBN3DLP A3001	VBN3DLP A0000
		27	VBN3DMP A1000	VBN3DMP A1001	VBN3DMP A2000	VBN3DMP A2001	VBN3DMP A3000	VBN3DMP A3001	VBN3DMP A0000
34*	VBN3DNPA1000	VBN3DNPA1001	VBN3DNPA2000	VBN3DNPA2001	VBN3DNPA3000	VBN3DNPA3001	VBN3DNPA0000		

\* Full port ball. No flow characterizing insert.




3-Way



## PRODUCT SELECTION - VALVES

### MVN Actuator With Low Profile 3-Way NPT Valves 1/2"-1 1/4"

Actuator Features		Non Fail Safe						Valve Only
Actuator O.S Number/ Short Order Code		MVN613L0000	MVN613L0000+C1	MVN643L0000	MVN643L0000+C1	MVN713L0000	MVN713L0000+C1	N/A
Power Supply	Voltage	24 VAC	24 VAC	24 VAC/DC	24VAC/DC	24 VAC/DC	24 VAC/DC	
	Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	
	Power	1.5 VA	1.5 VA	6 VA	6 VA	5 VA	5 VA	
Actuator Torque (lb.-in.)	27	27	27	27	27	27		
Control	Modulating (0)2-10Vdc					•	•	
	Floating	•	•	•	•			
	Fast acting SPDT			•	•			
Actuator Stroke (degrees)		90° ± 3°	90° ± 3°	90° ± 3°	90° ± 3°	90° ± 3°	90° ± 3°	
Timing (seconds)		90	90	30	30	90	90	
Fail Safe Action		Fail in Place	Fail in Place	Fail in Place	Fail in Place	Fail in Place	Fail in Place	
Valve Features	Trim	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	



Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes						
			No Cable	1 Meter Cable	No Cable	1 Meter Cable	No Cable	1 Meter Cable	Valve Only
1/2"	50	0.33	VBN3ABPL1000	VBN3ABPL1001	VBN3ABPL2000	VBN3ABPL2001	VBN3ABPL3000	VBN3ABPL3001	VBN3ABPL0000
		0.59	VBN3ACPL1000	VBN3ACPL1001	VBN3ACPL2000	VBN3ACPL2001	VBN3ACPL3000	VBN3ACPL3001	VBN3ACPL0000
		1	VBN3AEPL1000	VBN3AEPL1001	VBN3AEPL2000	VBN3AEPL2001	VBN3AEPL3000	VBN3AEPL3001	VBN3AEPL0000
		2.4	VBN3AFPL1000	VBN3AFPL1001	VBN3AFPL2000	VBN3AFPL2001	VBN3AFPL3000	VBN3AFPL3001	VBN3AFPL0000
		4.3	VBN3AHPL1000	VBN3AHPL1001	VBN3AHPL2000	VBN3AHPL2001	VBN3AHPL3000	VBN3AHPL3001	VBN3AHPL0000
		8*	VBN3AJPL1000	VBN3AJPL1001	VBN3AJPL2000	VBN3AJPL2001	VBN3AJPL3000	VBN3AJPL3001	VBN3AJPL0000
3/4"	50	0.4	VBN3BCPL1000	VBN3BCPL1001	VBN3BCPL2000	VBN3BCPL2001	VBN3BCPL3000	VBN3BCPL3001	VBN3BCPL0000
		0.66	VBN3BDPL1000	VBN3BDPL1001	VBN3BDPL2000	VBN3BDPL2001	VBN3BDPL3000	VBN3BDPL3001	VBN3BDPL0000
		1.3	VBN3BEPL1000	VBN3BEPL1001	VBN3BEPL2000	VBN3BEPL2001	VBN3BEPL3000	VBN3BEPL3001	VBN3BEPL0000
		2.4	VBN3BFPL1000	VBN3BFPL1001	VBN3BFPL2000	VBN3BFPL2001	VBN3BFPL3000	VBN3BFPL3001	VBN3BFPL0000
		3.8	VBN3BGPL1000	VBN3BGPL1001	VBN3BGPL2000	VBN3BGPL2001	VBN3BGPL3000	VBN3BGPL3001	VBN3BGPL0000
		7	VBN3BJPL1000	VBN3BJPL1001	VBN3BJPL2000	VBN3BJPL2001	VBN3BJPL3000	VBN3BJPL3001	VBN3BJPL0000
1"	50	0.4	VBN3CCPL1000	VBN3CCPL1001	VBN3CCPL2000	VBN3CCPL2001	VBN3CCPL3000	VBN3CCPL3001	VBN3CCPL0000
		0.65	VBN3CDPL1000	VBN3CDPL1001	VBN3CDPL2000	VBN3CDPL2001	VBN3CDPL3000	VBN3CDPL3001	VBN3CDPL0000
		1.3	VBN3CEPL1000	VBN3CEPL1001	VBN3CEPL2000	VBN3CEPL2001	VBN3CEPL3000	VBN3CEPL3001	VBN3CEPL0000
		2.3	VBN3CFPL1000	VBN3CFPL1001	VBN3CFPL2000	VBN3CFPL2001	VBN3CFPL3000	VBN3CFPL3001	VBN3CFPL0000
		3.5	VBN3CGPL1000	VBN3CGPL1001	VBN3CGPL2000	VBN3CGPL2001	VBN3CGPL3000	VBN3CGPL3001	VBN3CGPL0000
		4.5	VBN3CHPL1000	VBN3CHPL1001	VBN3CHPL2000	VBN3CHPL2001	VBN3CHPL3000	VBN3CHPL3001	VBN3CHPL0000
		8.6	VBN3CJPL1000	VBN3CJPL1001	VBN3CJPL2000	VBN3CJPL2001	VBN3CJPL3000	VBN3CJPL3001	VBN3CJPL0000
		14.9	VBN3CKPL1000	VBN3CKPL1001	VBN3CKPL2000	VBN3CKPL2001	VBN3CKPL3000	VBN3CKPL3001	VBN3CKPL0000
		22*	VBN3CLPL1000	VBN3CLPL1001	VBN3CLPL2000	VBN3CLPL2001	VBN3CLPL3000	VBN3CLPL3001	VBN3CLPL0000
31*	VBN3CMPL1000	VBN3CMPL1001	VBN3CMPL2000	VBN3CMPL2001	VBN3CMPL3000	VBN3CMPL3001	VBN3CMPL0000		
1-1/4"	40	4.1	VBN3DHPL1000	VBN3DHPL1001	VBN3DHPL2000	VBN3DHPL2001	VBN3DHPL3000	VBN3DHPL3001	VBN3DHPL0000
		8.7	VBN3DJPL1000	VBN3DJPL1001	VBN3DJPL2000	VBN3DJPL2001	VBN3DJPL3000	VBN3DJPL3001	VBN3DJPL0000
		12.7	VBN3DKPL1000	VBN3DKPL1001	VBN3DKPL2000	VBN3DKPL2001	VBN3DKPL3000	VBN3DKPL3001	VBN3DKPL0000
		19.4*	VBN3DLPL1000	VBN3DLPL1001	VBN3DLPL2000	VBN3DLPL2001	VBN3DLPL3000	VBN3DLPL3001	VBN3DLPL0000
		27	VBN3DMPL1000	VBN3DMPL1001	VBN3DMPL2000	VBN3DMPL2001	VBN3DMPL3000	VBN3DMPL3001	VBN3DMPL0000
		34*	VBN3DNPL1000	VBN3DNPL1001	VBN3DNPL2000	VBN3DNPL2001	VBN3DNPL3000	VBN3DNPL3001	VBN3DNPL0000

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

2-Way NPT Valves 1/2"- 3", NEMA 2

Actuator Features			Non Fail Safe			
Actuator O.S. Number			MN6105A1011		MN6105A1201	
Power Supply	Voltage		24 VAC/DC		24 VAC/DC	
	Frequency		50 / 60 Hz		50 / 60 Hz	
	Power		5 VA		5 VA	
Actuator Torque	(lb.-in.)		44		44	
	Control	(O)2-10 Vdc 4-20 mA (external 500 Ohm Resistor)				
Actuator Stroke	(degrees)		95° ± 3°		95° ± 3°	
	Timing	(drive/spring return, seconds)	90		90	
	Aux Switch		0		2	
	Feedback	2-10 Vdc Built In	-		-	
Fail Safe Action		Stay in Place		Stay in Place		
Normal Position (no signal)		Stay in Place		Stay in Place		
Valve Features	Trim		Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes			
1/2"	130	0.38	VBN2ABPX4000	VBN2ABSX4000	VBN2ABPXC000	VBN2ABSXC000
		0.68	VBN2ADPX4000	VBN2ADSX4000	VBN2ADPXC000	VBN2ADSXC000
		1.3	VBN2AEPX4000	VBN2AESX4000	VBN2AEPXC000	VBN2AESXC000
		2	VBN2AFPX4000	VBN2AFSX4000	VBN2AFPXC000	VBN2AFSXC000
		2.6	VBN2AGPX4000	VBN2AGSX4000	VBN2AGPXC000	VBN2AGSXC000
		4.7	VBN2AHPX4000	VBN2AHSX4000	VBN2AHPXC000	VBN2AHSXC000
		8	VBN2AJPX4000	VBN2AJSX4000	VBN2AJPXC000	VBN2AJSXC000
3/4"	130	11.7*	VBN2AKPX4000	VBN2AKSX4000	VBN2AKPXC000	VBN2AKSXC000
		0.31	VBN2BBPX4000	VBN2BBSX4000	VBN2BBPXC000	VBN2BBSXC000
		0.63	VBN2BDPX4000	VBN2BDSX4000	VBN2BDPXC000	VBN2BDSXC000
		1.2	VBN2BEPX4000	VBN2BESX4000	VBN2BEPXC000	VBN2BESXC000
		2.5	VBN2BGPX4000	VBN2BGSX4000	VBN2BGPXC000	VBN2BGSXC000
		4.3	VBN2BHPX4000	VBN2BHSX4000	VBN2BHPXC000	VBN2BHSXC000
		7.4	VBN2BJPX4000	VBN2BJSX4000	VBN2BJPXC000	VBN2BJSXC000
1"	100	10.1	VBN2BKPX4000	VBN2BKSX4000	VBN2BKPXC000	VBN2BKSXC000
		14.7*	VBN2BLPX4000	VBN2BLSX4000	VBN2BLPXC000	VBN2BLSXC000
		29*	VBN2BMPX4000	VBN2BMSX4000	VBN2BMPXC000	VBN2BMSXC000
		4.4	VBN2CHPX4000	VBN2CHSX4000	VBN2CHPXC000	VBN2CHSXC000
		9	VBN2CJPX4000	VBN2CJSX4000	VBN2CJPXC000	VBN2CJSXC000
		15.3	VBN2CLPX4000	VBN2CLSX4000	VBN2CLPXC000	VBN2CLSXC000
		26	VBN2CMPX4000	VBN2CMSX4000	VBN2CMPXC000	VBN2CMSXC000
1-1/4"	100	44*	VBN2CNPX4000	VBN2CNSX4000	VBN2CNPXC000	VBN2CNSXC000
		54*	VBN2CPX4000	VBN2CPSX4000	VBN2CPPXC000	VBN2CPSXC000
		4.4	VBN2DHPX4000	VBN2DHSX4000	VBN2DHPXC000	VBN2DHSXC000
		8.3	VBN2DJPX4000	VBN2DJSX4000	VBN2DJPXC000	VBN2DJSXC000
		14.9	VBN2DKPX4000	VBN2DKSX4000	VBN2DKPXC000	VBN2DKSXC000
		25	VBN2DLPX4000	VBN2DLSX4000	VBN2DLPXC000	VBN2DLSXC000
		37	VBN2DMPX4000	VBN2DMSX4000	VBN2DMPXC000	VBN2DMSXC000
1-1/2"	100	41*	VBN2DNPX4000	VBN2DNSX4000	VBN2DNPXC000	VBN2DNSXC000
		102*	VBN2DSPX4000	VBN2DSSX4000	VBN2DSPXC000	VBN2DSSXC000
		23	VBN2ELPX4000	VBN2ELSX4000	VBN2ELPXC000	VBN2ELSXC000
		30	VBN2EMPX4000	VBN2EMSX4000	VBN2EMPXC000	VBN2EMSXC000
		41	VBN2ENPX4000	VBN2ENSX4000	VBN2ENPXC000	VBN2ENSXC000
		74*	VBN2ERPX4000	VBN2ERSX4000	VBN2ERPXC000	VBN2ERSXC000
		172*	VBN2E1PX4000	VBN2E1SX4000	VBN2E1PXC000	VBN2E1SXC000
2"	100	42	VBN2FNPX4000	VBN2FNSX4000	VBN2FNPXC000	VBN2FNSXC000
		57	VBN2FPPX4000	VBN2FPSX4000	VBN2FPPXC000	VBN2FPSXC000
		71	VBN2FRPX4000	VBN2FRSX4000	VBN2FRPXC000	VBN2FRSXC000
		100	VBN2FSPX4000	VBN2FSSX4000	VBN2FSPXC000	VBN2FSSXC000
		108*	VBN2FTPX4000	VBN2FTSX4000	VBN2FTPXC000	VBN2FTSXC000
		210	VBN2F1PX4000	VBN2F1SX4000	VBN2F1PXC000	VBN2F1SXC000
		266*	VBN2F2PX4000	VBN2F2SX4000	VBN2F2PXC000	VBN2F2SXC000
2-1/2"	100	45	VBN2GNPX4000	VBN2GNSX4000	VBN2GNPXC000	VBN2GNSXC000
		55	VBN2GPPX4000	VBN2GPSX4000	VBN2GPPXC000	VBN2GPSXC000
		72	VBN2GRPX4000	VBN2GRSX4000	VBN2GRPXC000	VBN2GRSXC000
		101	VBN2GSPX4000	VBN2GSSX4000	VBN2GSPXC000	VBN2GSSXC000
		162	VBN2GUPX4000	VBN2GUSX4000	VBN2GUPXC000	VBN2GUSXC000
3"	100	202*	VBN2G1PX4000	VBN2G1SX4000	VBN2G1PXC000	VBN2G1SXC000
		49	VBN2HNPX4000	VBN2HNSX4000	VBN2HNPXC000	VBN2HNSXC000
		63	VBN2HPPX4000	VBN2HPSX4000	VBN2HPPXC000	VBN2HPSXC000
		82	VBN2HRPX4000	VBN2HRSX4000	VBN2HRPXC000	VBN2HRSXC000
		124	VBN2HTPX4000	VBN2HTSX4000	VBN2HTPXC000	VBN2HTSXC000
145*	VBN2HUPX4000	VBN2HUSX4000	VBN2HUPXC000	VBN2HUSXC000		

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

2-Way NPT Valves 1/2" - 3", NEMA 2

Actuator Features			Non Fail Safe				Valve Only		
Actuator O.S. Number			MN7505A2001		MN7505A2209		N/A		
Power Supply	Voltage		24 VAC/DC		24 VAC/DC				
	Frequency		50 / 60 Hz		50 / 60 Hz				
	Power		5 VA		5 VA				
Actuator Torque (lb.-in.)			44		44				
Control (0)2-10 Vdc			•		•				
4-20 mA (external 500 Ohm Resistor)			•		•				
Floating			•		•				
Two-Position SPDT			•		•				
Two-Position SPST			•		•				
Actuator Stroke (degrees)			95° ± 3°		95° ± 3°				
Timing (drive/spring return, seconds)			90		90				
Aux Switch 2 x SPDT Add-on			0		2				
Feedback 2-10 Vdc Built In			•		•				
Fail Safe Action			Stay in Place		Stay in Place				
Normal Position (no signal)			Closed		Closed				
Valve Features			Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes						
1/2"	130	0.38	VBN2ABPX5000	VBN2ABSX5000	VBN2ABPX0000	VBN2ABSX0000	VBN2ABPX0000	VBN2ABSX0000	
		0.68	VBN2ADPX5000	VBN2ADSX5000	VBN2ADPX0000	VBN2ADSX0000	VBN2ADPX0000	VBN2ADSX0000	
		1.3	VBN2AEPX5000	VBN2AESX5000	VBN2AEPX0000	VBN2AESX0000	VBN2AEPX0000	VBN2AESX0000	
		2	VBN2AFPX5000	VBN2AFSX5000	VBN2AFPX0000	VBN2AFSX0000	VBN2AFPX0000	VBN2AFSX0000	
		2.6	VBN2AGPX5000	VBN2AGSX5000	VBN2AGPX0000	VBN2AGSX0000	VBN2AGPX0000	VBN2AGSX0000	
		4.7	VBN2AHPX5000	VBN2AHSX5000	VBN2AHPX0000	VBN2AHSX0000	VBN2AHPX0000	VBN2AHSX0000	
		8	VBN2AJPX5000	VBN2AJSX5000	VBN2AJPX0000	VBN2AJSX0000	VBN2AJPX0000	VBN2AJSX0000	
3/4"	130	11.7*	VBN2AKPX5000	VBN2AKSX5000	VBN2AKPX0000	VBN2AKSX0000	VBN2AKPX0000	VBN2AKSX0000	
		0.31	VBN2BBPX5000	VBN2BBSX5000	VBN2BBPX0000	VBN2BBSX0000	VBN2BBPX0000	VBN2BBSX0000	
		0.63	VBN2BDPX5000	VBN2BDSX5000	VBN2BDPX0000	VBN2BDSX0000	VBN2BDPX0000	VBN2BDSX0000	
		1.2	VBN2BEPX5000	VBN2BESX5000	VBN2BEPX0000	VBN2BESX0000	VBN2BEPX0000	VBN2BESX0000	
		2.5	VBN2BGPX5000	VBN2BGSX5000	VBN2BGPX0000	VBN2BGSX0000	VBN2BGPX0000	VBN2BGSX0000	
		4.3	VBN2BHPX5000	VBN2BHSX5000	VBN2BHPX0000	VBN2BHSX0000	VBN2BHPX0000	VBN2BHSX0000	
		7.4	VBN2BJPX5000	VBN2BJSX5000	VBN2BJPX0000	VBN2BJSX0000	VBN2BJPX0000	VBN2BJSX0000	
1"	100	10.1	VBN2BKPX5000	VBN2BKSX5000	VBN2BKPX0000	VBN2BKSX0000	VBN2BKPX0000	VBN2BKSX0000	
		14.7*	VBN2BLPX5000	VBN2BLSX5000	VBN2BLPX0000	VBN2BLSX0000	VBN2BLPX0000	VBN2BLSX0000	
		29*	VBN2BMPX5000	VBN2BMSX5000	VBN2BMPX0000	VBN2BMSX0000	VBN2BMPX0000	VBN2BMSX0000	
		4.4	VBN2CHPX5000	VBN2CHSX5000	VBN2CHPX0000	VBN2CHSX0000	VBN2CHPX0000	VBN2CHSX0000	
		9	VBN2CJPX5000	VBN2CJSX5000	VBN2CJPX0000	VBN2CJSX0000	VBN2CJPX0000	VBN2CJSX0000	
		15.3	VBN2CLPX5000	VBN2CLSX5000	VBN2CLPX0000	VBN2CLSX0000	VBN2CLPX0000	VBN2CLSX0000	
		26	VBN2CMPX5000	VBN2CMSX5000	VBN2CMPX0000	VBN2CMSX0000	VBN2CMPX0000	VBN2CMSX0000	
1-1/4"	100	44*	VBN2CNPX5000	VBN2CNSX5000	VBN2CNPX0000	VBN2CNSX0000	VBN2CNPX0000	VBN2CNSX0000	
		54*	VBN2CPPX5000	VBN2CPSX5000	VBN2CPPX0000	VBN2CPSX0000	VBN2CPPX0000	VBN2CPSX0000	
		4.4	VBN2DHPX5000	VBN2DHSX5000	VBN2DHPX0000	VBN2DHSX0000	VBN2DHPX0000	VBN2DHSX0000	
		8.3	VBN2DJPX5000	VBN2DJSX5000	VBN2DJPX0000	VBN2DJSX0000	VBN2DJPX0000	VBN2DJSX0000	
		14.9	VBN2DKPX5000	VBN2DKSX5000	VBN2DKPX0000	VBN2DKSX0000	VBN2DKPX0000	VBN2DKSX0000	
		25	VBN2DLPX5000	VBN2DLSX5000	VBN2DLPX0000	VBN2DLSX0000	VBN2DLPX0000	VBN2DLSX0000	
		37	VBN2DMPX5000	VBN2DMSX5000	VBN2DMPX0000	VBN2DMSX0000	VBN2DMPX0000	VBN2DMSX0000	
1-1/2"	100	41*	VBN2DNPX5000	VBN2DNSX5000	VBN2DNPX0000	VBN2DNSX0000	VBN2DNPX0000	VBN2DNSX0000	
		102*	VBN2DSPX5000	VBN2DSSX5000	VBN2DSPX0000	VBN2DSSX0000	VBN2DSPX0000	VBN2DSSX0000	
		23	VBN2ELPX5000	VBN2ELSX5000	VBN2ELPX0000	VBN2ELSX0000	VBN2ELPX0000	VBN2ELSX0000	
		30	VBN2EMPX5000	VBN2EMSX5000	VBN2EMPX0000	VBN2EMSX0000	VBN2EMPX0000	VBN2EMSX0000	
		41	VBN2ENPX5000	VBN2ENSX5000	VBN2ENPX0000	VBN2ENSX0000	VBN2ENPX0000	VBN2ENSX0000	
		74*	VBN2ERPX5000	VBN2ERSX5000	VBN2ERPX0000	VBN2ERSX0000	VBN2ERPX0000	VBN2ERSX0000	
		172*	VBN2E1PX5000	VBN2E1SX5000	VBN2E1PX0000	VBN2E1SX0000	VBN2E1PX0000	VBN2E1SX0000	
2"	100	42	VBN2FNPX5000	VBN2FNSX5000	VBN2FNPX0000	VBN2FNSX0000	VBN2FNPX0000	VBN2FNSX0000	
		57	VBN2FPPX5000	VBN2FPSX5000	VBN2FPPX0000	VBN2FPSX0000	VBN2FPPX0000	VBN2FPSX0000	
		71	VBN2FRPX5000	VBN2FRSX5000	VBN2FRPX0000	VBN2FRSX0000	VBN2FRPX0000	VBN2FRSX0000	
		100	VBN2FSPX5000	VBN2FSSX5000	VBN2FSPX0000	VBN2FSSX0000	VBN2FSPX0000	VBN2FSSX0000	
		108*	VBN2FTPX5000	VBN2FTSX5000	VBN2FTPX0000	VBN2FTSX0000	VBN2FTPX0000	VBN2FTSX0000	
		210	VBN2F1PX5000	VBN2F1SX5000	VBN2F1PX0000	VBN2F1SX0000	VBN2F1PX0000	VBN2F1SX0000	
		266*	VBN2F2PX5000	VBN2F2SX5000	VBN2F2PX0000	VBN2F2SX0000	VBN2F2PX0000	VBN2F2SX0000	
2-1/2"	100	45	VBN2GNPX5000	VBN2GNSX5000	VBN2GNPX0000	VBN2GNSX0000	VBN2GNPX0000	VBN2GNSX0000	
		55	VBN2GPPX5000	VBN2GPSX5000	VBN2GPPX0000	VBN2GPSX0000	VBN2GPPX0000	VBN2GPSX0000	
		72	VBN2GRPX5000	VBN2GRSX5000	VBN2GRPX0000	VBN2GRSX0000	VBN2GRPX0000	VBN2GRSX0000	
		101	VBN2GSPX5000	VBN2GSSX5000	VBN2GSPX0000	VBN2GSSX0000	VBN2GSPX0000	VBN2GSSX0000	
		162	VBN2GUPX5000	VBN2GUSX5000	VBN2GUPX0000	VBN2GUSX0000	VBN2GUPX0000	VBN2GUSX0000	
		202*	VBN2G1PX5000	VBN2G1SX5000	VBN2G1PX0000	VBN2G1SX0000	VBN2G1PX0000	VBN2G1SX0000	
		49	VBN2HNPX5000	VBN2HNSX5000	VBN2HNPX0000	VBN2HNSX0000	VBN2HNPX0000	VBN2HNSX0000	
3"	100	63	VBN2HPPX5000	VBN2HPSX5000	VBN2HPPX0000	VBN2HPSX0000	VBN2HPPX0000	VBN2HPSX0000	
		82	VBN2HRPX5000	VBN2HRSX5000	VBN2HRPX0000	VBN2HRSX0000	VBN2HRPX0000	VBN2HRSX0000	
		124	VBN2HTPX5000	VBN2HTSX5000	VBN2HTPX0000	VBN2HTSX0000	VBN2HTPX0000	VBN2HTSX0000	
		145*	VBN2HUPX5000	VBN2HUSX5000	VBN2HUPX0000	VBN2HUSX0000	VBN2HUPX0000	VBN2HUSX0000	



\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 2-Way NPT Valves 1/2"- 1-1/4", NEMA 2

Actuator Features			Fail Safe								
Actuator O.S. Number			MS3103J1023				MS3103J1223				
Power Supply	Voltage		24 VAC/DC				24 VAC/DC				
	Frequency		50 / 60 Hz				50 / 60 Hz				
	Power		4.5 VA				4.5 VA				
Actuator Torque (lb.-in.)			27				27				
Control (0)2-10 Vdc											
4-20 mA (external 500 Ohm Resistor)											
Sylk			•				•				
Two-Position SPDT											
Two-Position SPST											
Actuator Stroke (degrees)			95° ± 3°				95° ± 3°				
Timing (drive/spring return, seconds)			30-180 / 25				30-180 / 25				
Aux Switch			0				2				
Feedback 2-10 Vdc Built In			Sylk				Sylk				
Fail Safe Action			Closed		Open		Closed		Open		
Normal Position (no signal)			Closed		Open		Closed		Open		
Valve Features			Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
1/2"	130	0.38	VBN2ABPXG201	VBN2ABSXG201	VBN2ABPXG101	VBN2ABSXG101	VBN2ABPXH201	VBN2ABSXH201	VBN2ABPXH101	VBN2ABSXH101	
		0.68	VBN2ADPXG201	VBN2ADSXG201	VBN2ADPXG101	VBN2ADSXG101	VBN2ADPXH201	VBN2ADSXH201	VBN2ADPXH101	VBN2ADSXH101	
		1.3	VBN2AEPXG201	VBN2AESXG201	VBN2AEPXG101	VBN2AESXG101	VBN2AEPXH201	VBN2AESXH201	VBN2AEPXH101	VBN2AESXH101	
		2	VBN2AFPXG201	VBN2AFSXG201	VBN2AFPXG101	VBN2AFSXG101	VBN2AFPXH201	VBN2AFSXH201	VBN2AFPXH101	VBN2AFSXH101	
		2.6	VBN2AGPXG201	VBN2AGSXG201	VBN2AGPXG101	VBN2AGSXG101	VBN2AGPXH201	VBN2AGSXH201	VBN2AGPXH101	VBN2AGSXH101	
		4.7	VBN2AHPXG201	VBN2AHSXG201	VBN2AHPXG101	VBN2AHSXG101	VBN2AHPXH201	VBN2AHSXH201	VBN2AHPXH101	VBN2AHSXH101	
		8	VBN2AJPXG201	VBN2AJSXG201	VBN2AJPXG101	VBN2AJSXG101	VBN2AJPXH201	VBN2AJSXH201	VBN2AJPXH101	VBN2AJSXH101	
		11.7*	VBN2AKPXG201	VBN2AKSXG201	VBN2AKPXG101	VBN2AKSXG101	VBN2AKPXH201	VBN2AKSXH201	VBN2AKPXH101	VBN2AKSXH101	
3/4"	130	0.31	VBN2BBPXG201	VBN2BBSXG201	VBN2BBPXG101	VBN2BBSXG101	VBN2BBPXH201	VBN2BBSXH201	VBN2BBPXH101	VBN2BBSXH101	
		0.63	VBN2BDPXG201	VBN2BDSXG201	VBN2BDPXG101	VBN2BDSXG101	VBN2BDPXH201	VBN2BDSXH201	VBN2BDPXH101	VBN2BDSXH101	
		1.2	VBN2BEPXG201	VBN2BESXG201	VBN2BEPXG101	VBN2BESXG101	VBN2BEPXH201	VBN2BESXH201	VBN2BEPXH101	VBN2BESXH101	
		2.5	VBN2BGPXG201	VBN2BGSXG201	VBN2BGPXG101	VBN2BGSXG101	VBN2BGPXH201	VBN2BGSXH201	VBN2BGPXH101	VBN2BGSXH101	
		4.3	VBN2BHPXG201	VBN2BHSXG201	VBN2BHPXG101	VBN2BHSXG101	VBN2BHPXH201	VBN2BHSXH201	VBN2BHPXH101	VBN2BHSXH101	
		7.4	VBN2BJPXG201	VBN2BJSXG201	VBN2BJPXG101	VBN2BJSXG101	VBN2BJPXH201	VBN2BJSXH201	VBN2BJPXH101	VBN2BJSXH101	
		10.1	VBN2BKPXG201	VBN2BKSXG201	VBN2BKPXG101	VBN2BKSXG101	VBN2BKPXH201	VBN2BKSXH201	VBN2BKPXH101	VBN2BKSXH101	
		14.7*	VBN2BLPXG201	VBN2BLSXG201	VBN2BLPXG101	VBN2BLSXG101	VBN2BLPXH201	VBN2BLSXH201	VBN2BLPXH101	VBN2BLSXH101	
		29*	VBN2BMPXG201	VBN2BMSXG201	VBN2BMPXG101	VBN2BMSXG101	VBN2BMPXH201	VBN2BMSXH201	VBN2BMPXH101	VBN2BMSXH101	
1"	100	4.4	VBN2CHPXG201	VBN2CHSXG201	VBN2CHPXG101	VBN2CHSXG101	VBN2CHPXH201	VBN2CHSXH201	VBN2CHPXH101	VBN2CHSXH101	
		9	VBN2CJPGX201	VBN2CJSXG201	VBN2CJPGX101	VBN2CJSXG101	VBN2CJPXH201	VBN2CJSXH201	VBN2CJPXH101	VBN2CJSXH101	
		15.3	VBN2CLPXG201	VBN2CLSXG201	VBN2CLPXG101	VBN2CLSXG101	VBN2CLPXH201	VBN2CLSXH201	VBN2CLPXH101	VBN2CLSXH101	
		26	VBN2CMPXG201	VBN2CMSXG201	VBN2CMPXG101	VBN2CMSXG101	VBN2CMPXH201	VBN2CMSXH201	VBN2CMPXH101	VBN2CMSXH101	
		44*	VBN2CNPXG201	VBN2CNSXG201	VBN2CNPXG101	VBN2CNSXG101	VBN2CNPXH201	VBN2CNSXH201	VBN2CNPXH101	VBN2CNSXH101	
		54*	VBN2CPPXG201	VBN2CPSXG201	VBN2CPPXG101	VBN2CPSXG101	VBN2CPPXH201	VBN2CPSXH201	VBN2CPPXH101	VBN2CPSXH101	
1-1/4"	100	4.4	VBN2DHPXG201	VBN2DHSXG201	VBN2DHPXG101	VBN2DHSXG101	VBN2DHPXH201	VBN2DHSXH201	VBN2DHPXH101	VBN2DHSXH101	
		8.3	VBN2DJPGX201	VBN2DJSXG201	VBN2DJPGX101	VBN2DJSXG101	VBN2DJPXH201	VBN2DJSXH201	VBN2DJPXH101	VBN2DJSXH101	
		14.9	VBN2DKPXG201	VBN2DKSXG201	VBN2DKPXG101	VBN2DKSXG101	VBN2DKPXH201	VBN2DKSXH201	VBN2DKPXH101	VBN2DKSXH101	
		25	VBN2DLPXG201	VBN2DLSXG201	VBN2DLPXG101	VBN2DLSXG101	VBN2DLPXH201	VBN2DLSXH201	VBN2DLPXH101	VBN2DLSXH101	
		37	VBN2DMPXG201	VBN2DMSXG201	VBN2DMPXG101	VBN2DMSXG101	VBN2DMPXH201	VBN2DMSXH201	VBN2DMPXH101	VBN2DMSXH101	
		41*	VBN2DNPXG201	VBN2DNSXG201	VBN2DNPXG101	VBN2DNSXG101	VBN2DNPXH201	VBN2DNSXH201	VBN2DNPXH101	VBN2DNSXH101	
		102*	VBN2DSPXG201	VBN2DSSXG201	VBN2DSPXG101	VBN2DSSXG101	VBN2DSPXH201	VBN2DSSXH201	VBN2DSPXH101	VBN2DSSXH101	

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

2-Way NPT Valves 1/2"- 1 1/4", NEMA 2

Actuator Features			Fail Safe								
Actuator O.S. Number			MS7103A2024				MS7103A2224				
Power Supply	Voltage		24 VAC/DC				24 VAC/DC				
	Frequency		50 / 60 Hz				50 / 60 Hz				
	Power		4 VA				4 VA				
Actuator Torque (lb.-in.)			27				27				
Control (0)2-10 Vdc			•				•				
4-20 mA (external 500 Ohm Resistor)			•				•				
Floating											
Two-Position SPDT											
Two-Position SPST											
Actuator Stroke (degrees)			95° ± 3°				95° ± 3°				
Timing (drive/spring return, seconds)			90 / 25				90 / 25				
Aux Switch			0				2				
Feedback 2-10 Vdc Built In			•				•				
Fail Safe Action			Closed		Open		Closed		Open		
Normal Position (no signal)			Closed		Open		Closed		Open		
Valve Features			Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
1/2"	130	0.38	VBN2ABPX201	VBN2ABSXE201	VBN2ABPX101	VBN2ABSXE101	VBN2ABPXF201	VBN2ABSXF201	VBN2ABPXF101	VBN2ABSXF101	
		0.68	VBN2ADPX201	VBN2ADSXE201	VBN2ADPX101	VBN2ADSXE101	VBN2ADPXF201	VBN2ADSXF201	VBN2ADPXF101	VBN2ADSXF101	
		1.3	VBN2AEPXE201	VBN2AESXE201	VBN2AEPXE101	VBN2AESXE101	VBN2AEPXF201	VBN2AESXF201	VBN2AEPXF101	VBN2AESXF101	
		2	VBN2AFPXE201	VBN2AFSXE201	VBN2AFPXE101	VBN2AFSXE101	VBN2AFPXF201	VBN2AFSXF201	VBN2AFPXF101	VBN2AFSXF101	
		2.6	VBN2AGPXE201	VBN2AGSXE201	VBN2AGPXE101	VBN2AGSXE101	VBN2AGPXF201	VBN2AGSXF201	VBN2AGPXF101	VBN2AGSXF101	
		4.7	VBN2AHPXE201	VBN2AHSXE201	VBN2AHPXE101	VBN2AHSXE101	VBN2AHPXF201	VBN2AHSXF201	VBN2AHPXF101	VBN2AHSXF101	
		8	VBN2AJPX201	VBN2AJSXE201	VBN2AJPX101	VBN2AJSXE101	VBN2AJPXF201	VBN2AJSXF201	VBN2AJPXF101	VBN2AJSXF101	
		11.7*	VBN2AKPXE201	VBN2AKSXE201	VBN2AKPXE101	VBN2AKSXE101	VBN2AKPXF201	VBN2AKSXF201	VBN2AKPXF101	VBN2AKSXF101	
3/4"	130	0.31	VBN2BBPX201	VBN2BBSXE201	VBN2BBPX101	VBN2BBSXE101	VBN2BBPXF201	VBN2BBSXF201	VBN2BBPXF101	VBN2BBSXF101	
		0.63	VBN2BDPX201	VBN2BDSXE201	VBN2BDPX101	VBN2BDSXE101	VBN2BDPXF201	VBN2BDSXF201	VBN2BDPXF101	VBN2BDSXF101	
		1.2	VBN2BEPXE201	VBN2BESXE201	VBN2BEPXE101	VBN2BESXE101	VBN2BEPXF201	VBN2BESXF201	VBN2BEPXF101	VBN2BESXF101	
		2.5	VBN2BGPXE201	VBN2BGSXE201	VBN2BGPXE101	VBN2BGSXE101	VBN2BGPXF201	VBN2BGSXF201	VBN2BGPXF101	VBN2BGSXF101	
		4.3	VBN2BHPXE201	VBN2BHSXE201	VBN2BHPXE101	VBN2BHSXE101	VBN2BHPXF201	VBN2BHSXF201	VBN2BHPXF101	VBN2BHSXF101	
		7.4	VBN2BJPX201	VBN2BJSXE201	VBN2BJPX101	VBN2BJSXE101	VBN2BJPXF201	VBN2BJSXF201	VBN2BJPXF101	VBN2BJSXF101	
		10.1	VBN2BKPXE201	VBN2BKSXE201	VBN2BKPXE101	VBN2BKSXE101	VBN2BKPXF201	VBN2BKSXF201	VBN2BKPXF101	VBN2BKSXF101	
		14.7*	VBN2BLPX201	VBN2BLSXE201	VBN2BLPX101	VBN2BLSXE101	VBN2BLPXF201	VBN2BLSXF201	VBN2BLPXF101	VBN2BLSXF101	
1"	100	29*	VBN2BMPXE201	VBN2BMSXE201	VBN2BMPXE101	VBN2BMSXE101	VBN2BMPXF201	VBN2BMSXF201	VBN2BMPXF101	VBN2BMSXF101	
		4.4	VBN2CHPX201	VBN2CHSXE201	VBN2CHPX101	VBN2CHSXE101	VBN2CHPXF201	VBN2CHSXF201	VBN2CHPXF101	VBN2CHSXF101	
		9	VBN2CJPXE201	VBN2CJSXE201	VBN2CJPXE101	VBN2CJSXE101	VBN2CJPXF201	VBN2CJSXF201	VBN2CJPXF101	VBN2CJSXF101	
		15.3	VBN2CLPX201	VBN2CLSXE201	VBN2CLPX101	VBN2CLSXE101	VBN2CLPXF201	VBN2CLSXF201	VBN2CLPXF101	VBN2CLSXF101	
		26	VBN2CMPXE201	VBN2CMSXE201	VBN2CMPXE101	VBN2CMSXE101	VBN2CMPXF201	VBN2CMSXF201	VBN2CMPXF101	VBN2CMSXF101	
		44*	VBN2CNPXE201	VBN2CNSXE201	VBN2CNPXE101	VBN2CNSXE101	VBN2CNPXF201	VBN2CNSXF201	VBN2CNPXF101	VBN2CNSXF101	
1-1/4"	100	54*	VBN2CPPXE201	VBN2CPSXE201	VBN2CPPXE101	VBN2CPSXE101	VBN2CPPXF201	VBN2CPSXF201	VBN2CPPXF101	VBN2CPSXF101	
		4.4	VBN2DHPXE201	VBN2DHSXE201	VBN2DHPXE101	VBN2DHSXE101	VBN2DHPXF201	VBN2DHSXF201	VBN2DHPXF101	VBN2DHSXF101	
		8.3	VBN2DJPXE201	VBN2DJSXE201	VBN2DJPXE101	VBN2DJSXE101	VBN2DJPXF201	VBN2DJSXF201	VBN2DJPXF101	VBN2DJSXF101	
		14.9	VBN2DKPX201	VBN2DKSXE201	VBN2DKPX101	VBN2DKSXE101	VBN2DKPXF201	VBN2DKSXF201	VBN2DKPXF101	VBN2DKSXF101	
		25	VBN2DLPXE201	VBN2DLSXE201	VBN2DLPXE101	VBN2DLSXE101	VBN2DLPXF201	VBN2DLSXF201	VBN2DLPXF101	VBN2DLSXF101	
		37	VBN2DMPXE201	VBN2DMSXE201	VBN2DMPXE101	VBN2DMSXE101	VBN2DMPXF201	VBN2DMSXF201	VBN2DMPXF101	VBN2DMSXF101	
		41*	VBN2DNPXE201	VBN2DNSXE201	VBN2DNPXE101	VBN2DNSXE101	VBN2DNPXF201	VBN2DNSXF201	VBN2DNPXF101	VBN2DNSXF101	
102*	VBN2DSPXE201	VBN2DSSXE201	VBN2DSPXE101	VBN2DSSXE101	VBN2DSPXF201	VBN2DSSXF201	VBN2DSPXF101	VBN2DSSXF101			

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 2-Way NPT Valves 1½"- 3", NEMA 2

Actuator Features			Fail Safe								
Actuator O.S. Number			MS7505A2030				MS7505A2130				
Power Supply	Voltage		24 VAC/DC				24 VAC/DC				
	Frequency		50 / 60 Hz				50 / 60 Hz				
	Power		6 VA				6 VA				
Actuator Torque (lb.-in.)			44				44				
Control	(0)2-10 Vdc		•				•				
	4-20 mA (external 500 Ohm Resistor)		•				•				
	Floating		•				•				
	Two-Position SPDT		•				•				
	Two-Position SPST		•				•				
Actuator Stroke (degrees)			95° ± 3°				95° ± 3°				
Timing (drive/spring return, seconds)			90 / 25				90 / 25				
Aux Switch			0				1				
Feedback 2-10 Vdc Built In			•				•				
Fail Safe Action			Closed		Open		Closed		Open		
Normal Position (no signal)			Closed		Open		Closed		Open		
Valve Features			Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
1-1/2"	100	23	VBN2ELPX6200	VBN2ELSX6200	VBN2ELPX6100	VBN2ELSX6100	VBN2ELPX6200	VBN2ELSX6200	VBN2ELPX6100	VBN2ELSX6100	
		30	VBN2EMPX6200	VBN2EMSX6200	VBN2EMPX6100	VBN2EMSX6100	VBN2EMPX6200	VBN2EMSX6200	VBN2EMPX6100	VBN2EMSX6100	
		41	VBN2ENPX6200	VBN2ENSX6200	VBN2ENPX6100	VBN2ENSX6100	VBN2ENPX6200	VBN2ENSX6200	VBN2ENPX6100	VBN2ENSX6100	
		74*	VBN2ERPX6200	VBN2ERSX6200	VBN2ERPX6100	VBN2ERSX6100	VBN2ERPX6200	VBN2ERSX6200	VBN2ERPX6100	VBN2ERSX6100	
		172*	VBN2E1PX6200	VBN2E1SX6200	VBN2E1PX6100	VBN2E1SX6100	VBN2E1PX6200	VBN2E1SX6200	VBN2E1PX6100	VBN2E1SX6100	
2"	100	42	VBN2FNPX6200	VBN2FNSX6200	VBN2FNPX6100	VBN2FNSX6100	VBN2FNPX6200	VBN2FNSX6200	VBN2FNPX6100	VBN2FNSX6100	
		57	VBN2FPPX6200	VBN2FPSX6200	VBN2FPPX6100	VBN2FPSX6100	VBN2FPPX6200	VBN2FPSX6200	VBN2FPPX6100	VBN2FPSX6100	
		71	VBN2FRPX6200	VBN2FRSX6200	VBN2FRPX6100	VBN2FRSX6100	VBN2FRPX6200	VBN2FRSX6200	VBN2FRPX6100	VBN2FRSX6100	
		100	VBN2FSPX6200	VBN2FSSX6200	VBN2FSPX6100	VBN2FSSX6100	VBN2FSPX6200	VBN2FSSX6200	VBN2FSPX6100	VBN2FSSX6100	
		108*	VBN2FTPX6200	VBN2FTSX6200	VBN2FTPX6100	VBN2FTSX6100	VBN2FTPX6200	VBN2FTSX6200	VBN2FTPX6100	VBN2FTSX6100	
		210	VBN2F1PX6200	VBN2F1SX6200	VBN2F1PX6100	VBN2F1SX6100	VBN2F1PX6200	VBN2F1SX6200	VBN2F1PX6100	VBN2F1SX6100	
2-1/2"	100	266*	VBN2F2PX6200	VBN2F2SX6200	VBN2F2PX6100	VBN2F2SX6100	VBN2F2PX6200	VBN2F2SX6200	VBN2F2PX6100	VBN2F2SX6100	
		45	VBN2GNPX6200	VBN2GNSX6200	VBN2GNPX6100	VBN2GNSX6100	VBN2GNPX6200	VBN2GNSX6200	VBN2GNPX6100	VBN2GNSX6100	
		55	VBN2GPPX6200	VBN2GPSX6200	VBN2GPPX6100	VBN2GPSX6100	VBN2GPPX6200	VBN2GPSX6200	VBN2GPPX6100	VBN2GPSX6100	
		72	VBN2GRPX6200	VBN2GRSX6200	VBN2GRPX6100	VBN2GRSX6100	VBN2GRPX6200	VBN2GRSX6200	VBN2GRPX6100	VBN2GRSX6100	
		101	VBN2GSPX6200	VBN2GSSX6200	VBN2GSPX6100	VBN2GSSX6100	VBN2GSPX6200	VBN2GSSX6200	VBN2GSPX6100	VBN2GSSX6100	
		162	VBN2GUPX6200	VBN2GUSX6200	VBN2GUPX6100	VBN2GUSX6100	VBN2GUPX6200	VBN2GUSX6200	VBN2GUPX6100	VBN2GUSX6100	
3	100	202*	VBN2G1PX6200	VBN2G1SX6200	VBN2G1PX6100	VBN2G1SX6100	VBN2G1PX6200	VBN2G1SX6200	VBN2G1PX6100	VBN2G1SX6100	
		49	VBN2HNPX6200	VBN2HNSX6200	VBN2HNPX6100	VBN2HNSX6100	VBN2HNPX6200	VBN2HNSX6200	VBN2HNPX6100	VBN2HNSX6100	
		63	VBN2HPPX6200	VBN2HPSX6200	VBN2HPPX6100	VBN2HPSX6100	VBN2HPPX6200	VBN2HPSX6200	VBN2HPPX6100	VBN2HPSX6100	
		82	VBN2HRPX6200	VBN2HRSX6200	VBN2HRPX6100	VBN2HRSX6100	VBN2HRPX6200	VBN2HRSX6200	VBN2HRPX6100	VBN2HRSX6100	
		124	VBN2HTPX6200	VBN2HTSX6200	VBN2HTPX6100	VBN2HTSX6100	VBN2HTPX6200	VBN2HTSX6200	VBN2HTPX6100	VBN2HTSX6100	
145*	VBN2HUPX6200	VBN2HUSX6200	VBN2HUPX6100	VBN2HUSX6100	VBN2HUPX6200	VBN2HUSX6200	VBN2HUPX6100	VBN2HUSX6100			

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 2-Way NPT Valves 1/2" - 3", NEMA 2

Actuator Features			Fail Safe							
Actuator O.S. Number			MS8105A1030				MS8105A1130			
Power Supply	Voltage	24 VAC/DC				24 VAC/DC				
	Frequency	50 / 60 Hz				50 / 60 Hz				
	Power	6 VA				6 VA				
Actuator Torque	(lb.-in.)	44				44				
Control	(0)2-10 Vdc									
4-20 mA (external 500 Ohm Resistor)										
Floating										
Two-Position SPDT										
Two-Position SPST		•				•				
Actuator Stroke	(degrees)	95° ± 3°				95° ± 3°				
Timing	(drive/spring return, seconds)	45 / 25				45 / 25				
Aux Switch			0				1			
Feedback	2-10 Vdc Built In									
Fail Safe Action			Closed		Open		Closed		Open	
Normal Position (no signal)			Closed		Open		Closed		Open	
Valve Features	Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes							
1/2"	130	0.38	VBN2ABPX7200	VBN2ABSX7200	VBN2ABPX7100	VBN2ABSX7100	VBN2ABPX200	VBN2ABSXA200	VBN2ABPX100	VBN2ABSXA100
		0.68	VBN2ADPX7200	VBN2ADSX7200	VBN2ADPX7100	VBN2ADSX7100	VBN2ADPX200	VBN2ADSXA200	VBN2ADPX100	VBN2ADSXA100
		1.3	VBN2AEPX7200	VBN2AESX7200	VBN2AEPX7100	VBN2AESX7100	VBN2AEPX200	VBN2AESXA200	VBN2AEPX100	VBN2AESXA100
		2	VBN2AFPX7200	VBN2AFSX7200	VBN2AFPX7100	VBN2AFSX7100	VBN2AFPX200	VBN2AFSXA200	VBN2AFPX100	VBN2AFSXA100
		2.6	VBN2AGPX7200	VBN2AGSX7200	VBN2AGPX7100	VBN2AGSX7100	VBN2AGPX200	VBN2AGSXA200	VBN2AGPX100	VBN2AGSXA100
		4.7	VBN2AHPX7200	VBN2AHSX7200	VBN2AHPX7100	VBN2AHSX7100	VBN2AHPX200	VBN2AHSXA200	VBN2AHPX100	VBN2AHSXA100
		8	VBN2AJPX7200	VBN2AJSX7200	VBN2AJPX7100	VBN2AJSX7100	VBN2AJPX200	VBN2AJSXA200	VBN2AJPX100	VBN2AJSXA100
	130	11.7*	VBN2AKPX7200	VBN2AKSX7200	VBN2AKPX7100	VBN2AKSX7100	VBN2AKPX200	VBN2AKSXA200	VBN2AKPX100	VBN2AKSXA100
		0.31	VBN2BBPX7200	VBN2BBSX7200	VBN2BBPX7100	VBN2BBSX7100	VBN2BBPX200	VBN2BBSXA200	VBN2BBPX100	VBN2BBSXA100
		0.63	VBN2BDPX7200	VBN2BDSX7200	VBN2BDPX7100	VBN2BDSX7100	VBN2BDPX200	VBN2BDSXA200	VBN2BDPX100	VBN2BDSXA100
		1.2	VBN2BEPX7200	VBN2BESX7200	VBN2BEPX7100	VBN2BESX7100	VBN2BEPX200	VBN2BESXA200	VBN2BEPX100	VBN2BESXA100
		2.5	VBN2BGPX7200	VBN2BGSX7200	VBN2BGPX7100	VBN2BGSX7100	VBN2BGPX200	VBN2BGSXA200	VBN2BGPX100	VBN2BGSXA100
		4.3	VBN2BHPX7200	VBN2BHSX7200	VBN2BHPX7100	VBN2BHSX7100	VBN2BHPX200	VBN2BHSXA200	VBN2BHPX100	VBN2BHSXA100
		7.4	VBN2BJPX7200	VBN2BJSX7200	VBN2BJPX7100	VBN2BJSX7100	VBN2BJPX200	VBN2BJSXA200	VBN2BJPX100	VBN2BJSXA100
100	10.1	VBN2BKPX7200	VBN2BKSX7200	VBN2BKPX7100	VBN2BKSX7100	VBN2BKPX200	VBN2BKSXA200	VBN2BKPX100	VBN2BKSXA100	
	14.7*	VBN2BLPX7200	VBN2BLSX7200	VBN2BLPX7100	VBN2BLSX7100	VBN2BLPX200	VBN2BLSXA200	VBN2BLPX100	VBN2BLSXA100	
	29*	VBN2BMPX7200	VBN2BMSX7200	VBN2BMPX7100	VBN2BMSX7100	VBN2BMPX200	VBN2BMSXA200	VBN2BMPX100	VBN2BMSXA100	
	4.4	VBN2CHPX7200	VBN2CHSX7200	VBN2CHPX7100	VBN2CHSX7100	VBN2CHPX200	VBN2CHSXA200	VBN2CHPX100	VBN2CHSXA100	
	9	VBN2CJPX7200	VBN2CJSX7200	VBN2CJPX7100	VBN2CJSX7100	VBN2CJPX200	VBN2CJSXA200	VBN2CJPX100	VBN2CJSXA100	
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	145*	VBN2HUPX7200	VBN2HUSX7200	VBN2HUPX7100	VBN2HUSX7100	VBN2HUPX200	VBN2HUSXA200	VBN2HUPX100	VBN2HUSXA100	

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 2-Way NPT Valves 1/2" - 3", NEMA 2

Actuator Features			Fail Safe								
Actuator O.S. Number			MS4105A1030				MS4105A1130				
Power Supply		Voltage	100-250 VAC				100-250 VAC				
		Frequency	50 / 60 Hz				50 / 60 Hz				
		Power	6 VA				6 VA				
Actuator Torque		(lb.-in.)	44				44				
Control			(0)2-10 Vdc								
			4-20 mA (external 500 Ohm Resistor)								
			Floating								
			Two-Position SPDT								
			Two-Position SPST								
Actuator Stroke		(degrees)	95° ± 3°				95° ± 3°				
Timing		(drive/spring return, seconds)	45 / 25				45 / 25				
Aux Switch			0				1				
Feedback		2-10 Vdc Built In									
Fail Safe Action			Closed		Open		Closed		Open		
Normal Position (no signal)			Closed		Open		Closed		Open		
Valve Features			Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
1/2"	130	0.38	VBN2ABPX8200	VBN2ABSX8200	VBN2ABPX8100	VBN2ABSX8100	VBN2ABPX9200	VBN2ABSX9200	VBN2ABPX9100	VBN2ABSX9100	
		0.68	VBN2ADPX8200	VBN2ADSX8200	VBN2ADPX8100	VBN2ADSX8100	VBN2ADPX9200	VBN2ADSX9200	VBN2ADPX9100	VBN2ADSX9100	
		1.3	VBN2AEPX8200	VBN2AESX8200	VBN2AEPX8100	VBN2AESX8100	VBN2AEPX9200	VBN2AESX9200	VBN2AEPX9100	VBN2AESX9100	
		2	VBN2AFPX8200	VBN2AFSX8200	VBN2AFPX8100	VBN2AFSX8100	VBN2AFPX9200	VBN2AFSX9200	VBN2AFPX9100	VBN2AFSX9100	
		2.6	VBN2AGPX8200	VBN2AGSX8200	VBN2AGPX8100	VBN2AGSX8100	VBN2AGPX9200	VBN2AGSX9200	VBN2AGPX9100	VBN2AGSX9100	
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3/4"	130	11.7*	VBN2AKPX8200	VBN2AKSX8200	VBN2AKPX8100	VBN2AKSX8100	VBN2AKPX9200	VBN2AKSX9200	VBN2AKPX9100	VBN2AKSX9100	
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1-1/4"	100	44*	VBN2CNPX8200	VBN2CNSX8200	VBN2CNPX8100	VBN2CNSX8100	VBN2CNPX9200	VBN2CNSX9200	VBN2CNPX9100	VBN2CNSX9100	
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1-1/2"	100	41*	VBN2DNPX8200	VBN2DNSX8200	VBN2DNPX8100	VBN2DNSX8100	VBN2DNPX9200	VBN2DNSX9200	VBN2DNPX9100	VBN2DNSX9100	
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\* Full port ball. No flow characterizing insert.



# PRODUCT SELECTION - VALVES

2-Way NPT Valves 1/2" - 3", NEMA 3R

Actuator Features			Non Fail Safe							
Actuator O.S. Number			MN6105A1011		MN6105A1201		MN7505A2001		MN7505A2209	
Power Supply	Voltage	24 VAC/DC		24 VAC/DC		24 VAC/DC		24 VAC/DC		
	Frequency	50 / 60 Hz		50 / 60 Hz		50 / 60 Hz		50 / 60 Hz		
Actuator Torque	Power	5 VA		5 VA		5 VA		5 VA		
	(lb.-in.)	44		44		44		44		
Control	(0)2-10 Vdc									
	4-20 mA (external 500 Ohm Resistor)									
Fail Safe Action	Floating	•		•		•		•		
	Two-Position SPDT	•		•		•		•		
	Two-Position SPST	•		•		•		•		
	Normal Position (no signal)	Stay in Place		Stay in Place		Stay in Place		Stay in Place		
Valve Features	Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes							
1/2"	130	0.38	VBN2ABPX4002	VBN2ABSX4002	VBN2ABPXC002	VBN2ABSXC002	VBN2ABPX5002	VBN2ABSX5002	VBN2ABPXD002	VBN2ABSXD002
		0.68	VBN2ADPX4002	VBN2ADXSX4002	VBN2ADPXC002	VBN2ADSXC002	VBN2ADPX5002	VBN2ADSX5002	VBN2ADPXD002	VBN2ADSXD002
		1.3	VBN2AEPX4002	VBN2AESX4002	VBN2AEPXC002	VBN2AESXC002	VBN2AEPX5002	VBN2AESX5002	VBN2AEPXD002	VBN2AESXD002
		2	VBN2AFPX4002	VBN2AFSX4002	VBN2AFPXC002	VBN2AFSXC002	VBN2AFPX5002	VBN2AFSX5002	VBN2AFPXD002	VBN2AFSXD002
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		11.7*	VBN2AKPX4002	VBN2AKSX4002	VBN2AKPXC002	VBN2AKSXC002	VBN2AKPX5002	VBN2AKSX5002	VBN2AKPXD002	VBN2AKSX002
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		63	VBN2HPPX4002	VBN2HPSX4002	VBN2HPPXC002	VBN2HPSXC002	VBN2HPPX5002	VBN2HPSX5002	VBN2HPPXD002	VBN2HPSXD002
		82	VBN2HRPX4002	VBN2HRSX4002	VBN2HRPXC002	VBN2HRSXC002	VBN2HRPX5002	VBN2HRSX5002	VBN2HRPXD002	VBN2HRSXD002
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\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 2-Way NPT Valves 1/2"- 3", NEMA 3R

Actuator Features			Fail Safe								
Actuator O.S. Number			MS7505A2030				MS7505A2130				
Power Supply	Voltage		24 VAC/DC				24 VAC/DC				
	Frequency		50 / 60 Hz				50 / 60 Hz				
	Power		6 VA				6 VA				
Actuator Torque	(lb.-in.)		44				44				
	(0)2-10 Vdc		•				•				
Control	4-20 mA (external 500 Ohm Resistor)		•				•				
	Floating		•				•				
	Two-Position SPDT		•				•				
	Two-Position SPST		•				•				
Actuator Stroke	(degrees)		95° ± 3°				95° ± 3°				
Timing	(drive/spring return, seconds)		90 / 25				90 / 25				
Aux Switch			0				1				
Feedback	2-10 Vdc Built In		•				•				
Fail Safe Action			Closed		Open		Closed		Open		
Normal Position (no signal)			Closed		Open		Closed		Open		
Valve Features			Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
1/2"	130	0.38	VBN2ABPX6202	VBN2ABSX6202	VBN2ABPX6102	VBN2ABSX6102	VBN2ABPX202	VBN2ABSXB202	VBN2ABPX102	VBN2ABSXB102	
		0.68	VBN2ADPX6202	VBN2ADSX6202	VBN2ADPX6102	VBN2ADSX6102	VBN2ADPX202	VBN2ADSXB202	VBN2ADPX102	VBN2ADSXB102	
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		2	VBN2AFPX6202	VBN2AFSX6202	VBN2AFPX6102	VBN2AFSX6102	VBN2AFPX202	VBN2AFSXB202	VBN2AFPX102	VBN2AFSXB102	
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		11.7*	VBN2AKPX6202	VBN2AKSX6202	VBN2AKPX6102	VBN2AKSX6102	VBN2AKPX202	VBN2AKSXB202	VBN2AKPX102	VBN2AKSXB102	
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3/4"	130	1.2	VBN2BEPX6202	VBN2BESX6202	VBN2BEPX6102	VBN2BESX6102	VBN2BEPX202	VBN2BESXB202	VBN2BEPX102	VBN2BESXB102	
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		49	VBN2HNPX6202	VBN2HNSX6202	VBN2HNPX6102	VBN2HNSX6102	VBN2HNPX202	VBN2HNSXB202	VBN2HNPX102	VBN2HNSXB102	
		63	VBN2HPPX6202	VBN2HPSX6202	VBN2HPPX6102	VBN2HPSX6102	VBN2HPPX202	VBN2HPSXB202	VBN2HPPX102	VBN2HPSXB102	
3"	100	82	VBN2HRPX6202	VBN2HRSX6202	VBN2HRPX6102	VBN2HRSX6102	VBN2HRPX202	VBN2HRSXB202	VBN2HRPX102	VBN2HRSXB102	
		124	VBN2HTPX6202	VBN2HTSX6202	VBN2HTPX6102	VBN2HTSX6102	VBN2HTPX202	VBN2HTSXB202	VBN2HTPX102	VBN2HTSXB102	
		145*	VBN2HUPX6202	VBN2HUSX6202	VBN2HUPX6102	VBN2HUSX6102	VBN2HUPX202	VBN2HUSXB202	VBN2HUPX102	VBN2HUSXB102	

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

2-Way NPT Valves 1/2" - 3", NEMA 3R

Actuator Features			Fail Safe								
Actuator O.S. Number			MS8105A1030				MS8105A1130				
Power Supply	Voltage		24 VAC/DC				24 VAC/DC				
	Frequency		50 / 60 Hz				50 / 60 Hz				
	Power		6 VA				6 VA				
Actuator Torque (lb.-in.)			44				44				
Control (0)2-10 Vdc											
4-20 mA (external 500 Ohm Resistor)											
Floating											
Two-Position SPDT											
Two-Position SPST											
Actuator Stroke (degrees)			95° ± 3°				95° ± 3°				
Timing (drive/spring return, seconds)			45 / 25				45 / 25				
Aux Switch			0				1				
Feedback 2-10 Vdc Built In											
Fail Safe Action			Closed		Open		Closed		Open		
Normal Position (no signal)			Closed		Open		Closed		Open		
Valve Features			Trim	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
1/2"	130	0.38	VBN2ABPX7202	VBN2ABSX7202	VBN2ABPX7102	VBN2ABSX7102	VBN2ABPX202	VBN2ABSXA202	VBN2ABPX102	VBN2ABSXA102	
		0.68	VBN2ADPX7202	VBN2ADSX7202	VBN2ADPX7102	VBN2ADSX7102	VBN2ADPX202	VBN2ADSXA202	VBN2ADPX102	VBN2ADSXA102	
		1.3	VBN2AEPX7202	VBN2AESX7202	VBN2AEPX7102	VBN2AESX7102	VBN2AEPX202	VBN2AESXA202	VBN2AEPX102	VBN2AESXA102	
		2	VBN2AFPX7202	VBN2AFSX7202	VBN2AFPX7102	VBN2AFSX7102	VBN2AFPX202	VBN2AFSXA202	VBN2AFPX102	VBN2AFSXA102	
		2.6	VBN2AGPX7202	VBN2AGSX7202	VBN2AGPX7102	VBN2AGSX7102	VBN2AGPX202	VBN2AGSXA202	VBN2AGPX102	VBN2AGSXA102	
		4.7	VBN2AHPX7202	VBN2AHSX7202	VBN2AHPX7102	VBN2AHSX7102	VBN2AHPX202	VBN2AHSXA202	VBN2AHPX102	VBN2AHSXA102	
		8	VBN2AJPX7202	VBN2AJSX7202	VBN2AJPX7102	VBN2AJSX7102	VBN2AJPX202	VBN2AJSXA202	VBN2AJPX102	VBN2AJSXA102	
		11.7*	VBN2AKPX7202	VBN2AKSX7202	VBN2AKPX7102	VBN2AKSX7102	VBN2AKPX202	VBN2AKSXA202	VBN2AKPX102	VBN2AKSXA102	
		0.31	VBN2BBPX7202	VBN2BBSX7202	VBN2BBPX7102	VBN2BBSX7102	VBN2BBPX202	VBN2BBSXA202	VBN2BBPX102	VBN2BBSXA102	
		0.63	VBN2BDPX7202	VBN2BDSX7202	VBN2BDPX7102	VBN2BDSX7102	VBN2BDPX202	VBN2BDSXA202	VBN2BDPX102	VBN2BDSXA102	
		1.2	VBN2BEPX7202	VBN2BESX7202	VBN2BEPX7102	VBN2BESX7102	VBN2BEPX202	VBN2BESXA202	VBN2BEPX102	VBN2BESXA102	
		2.5	VBN2BGPX7202	VBN2BGSX7202	VBN2BGPX7102	VBN2BGSX7102	VBN2BGPX202	VBN2BGSXA202	VBN2BGPX102	VBN2BGSXA102	
3/4"	130	4.3	VBN2BHPX7202	VBN2BHSX7202	VBN2BHPX7102	VBN2BHSX7102	VBN2BHPX202	VBN2BHSXA202	VBN2BHPX102	VBN2BHSXA102	
		7.4	VBN2BJPX7202	VBN2BJSX7202	VBN2BJPX7102	VBN2BJSX7102	VBN2BJPX202	VBN2BJSXA202	VBN2BJPX102	VBN2BJSXA102	
		10.1	VBN2BKPX7202	VBN2BKSX7202	VBN2BKPX7102	VBN2BKSX7102	VBN2BKPX202	VBN2BKSXA202	VBN2BKPX102	VBN2BKSXA102	
		14.7*	VBN2BLPX7202	VBN2BLSX7202	VBN2BLPX7102	VBN2BLSX7102	VBN2BLPX202	VBN2BLSXA202	VBN2BLPX102	VBN2BLSXA102	
		29*	VBN2BMPX7202	VBN2BMSX7202	VBN2BMPX7102	VBN2BMSX7102	VBN2BMPX202	VBN2BMSXA202	VBN2BMPX102	VBN2BMSXA102	
		4.4	VBN2CHPX7202	VBN2CHSX7202	VBN2CHPX7102	VBN2CHSX7102	VBN2CHPX202	VBN2CHSXA202	VBN2CHPX102	VBN2CHSXA102	
		9	VBN2CJPX7202	VBN2CJSX7202	VBN2CJPX7102	VBN2CJSX7102	VBN2CJPX202	VBN2CJSXA202	VBN2CJPX102	VBN2CJSXA102	
		15.3	VBN2CLPX7202	VBN2CLSX7202	VBN2CLPX7102	VBN2CLSX7102	VBN2CLPX202	VBN2CLSXA202	VBN2CLPX102	VBN2CLSXA102	
		26	VBN2CMPX7202	VBN2CMSX7202	VBN2CMPX7102	VBN2CMSX7102	VBN2CMPX202	VBN2CMSXA202	VBN2CMPX102	VBN2CMSXA102	
		44*	VBN2CNPX7202	VBN2CNSX7202	VBN2CNPX7102	VBN2CNSX7102	VBN2CNPX202	VBN2CNSXA202	VBN2CNPX102	VBN2CNSXA102	
		54*	VBN2CPPX7202	VBN2CPSX7202	VBN2CPPX7102	VBN2CPSX7102	VBN2CPPX202	VBN2CPSXA202	VBN2CPPX102	VBN2CPSXA102	
		4.4	VBN2DHPX7202	VBN2DHSX7202	VBN2DHPX7102	VBN2DHSX7102	VBN2DHPX202	VBN2DHSXA202	VBN2DHPX102	VBN2DHSXA102	
1-1/4"	100	8.3	VBN2DJPX7202	VBN2DJSX7202	VBN2DJPX7102	VBN2DJSX7102	VBN2DJPX202	VBN2DJSXA202	VBN2DJPX102	VBN2DJSXA102	
		14.9	VBN2DKPX7202	VBN2DKSX7202	VBN2DKPX7102	VBN2DKSX7102	VBN2DKPX202	VBN2DKSXA202	VBN2DKPX102	VBN2DKSXA102	
		25	VBN2DLPX7202	VBN2DLSX7202	VBN2DLPX7102	VBN2DLSX7102	VBN2DLPX202	VBN2DLSXA202	VBN2DLPX102	VBN2DLSXA102	
		37	VBN2DMPX7202	VBN2DMSX7202	VBN2DMPX7102	VBN2DMSX7102	VBN2DMPX202	VBN2DMSXA202	VBN2DMPX102	VBN2DMSXA102	
		41*	VBN2DNPX7202	VBN2DNSX7202	VBN2DNPX7102	VBN2DNSX7102	VBN2DNPX202	VBN2DNSXA202	VBN2DNPX102	VBN2DNSXA102	
		102*	VBN2DSPX7202	VBN2DSSX7202	VBN2DSPX7102	VBN2DSSX7102	VBN2DSPX202	VBN2DSSXA202	VBN2DSPX102	VBN2DSSXA102	
		23	VBN2ELPX7202	VBN2ELSX7202	VBN2ELPX7102	VBN2ELSX7102	VBN2ELPX202	VBN2ELSXA202	VBN2ELPX102	VBN2ELSXA102	
		30	VBN2EMPX7202	VBN2EMSX7202	VBN2EMPX7102	VBN2EMSX7102	VBN2EMPX202	VBN2EMSXA202	VBN2EMPX102	VBN2EMSXA102	
		41	VBN2ENPX7202	VBN2ENSX7202	VBN2ENPX7102	VBN2ENSX7102	VBN2ENPX202	VBN2ENSXA202	VBN2ENPX102	VBN2ENSXA102	
		74*	VBN2ERPX7202	VBN2ERSX7202	VBN2ERPX7102	VBN2ERSX7102	VBN2ERPX202	VBN2ERSXA202	VBN2ERPX102	VBN2ERSXA102	
		172*	VBN2E1PX7202	VBN2E1SX7202	VBN2E1PX7102	VBN2E1SX7102	VBN2E1PX202	VBN2E1SXA202	VBN2E1PX102	VBN2E1SXA102	
		42	VBN2FNPX7202	VBN2FNSX7202	VBN2FNPX7102	VBN2FNSX7102	VBN2FNPX202	VBN2FNSXA202	VBN2FNPX102	VBN2FNSXA102	
2"	100	57	VBN2FPPX7202	VBN2FPSX7202	VBN2FPPX7102	VBN2FPSX7102	VBN2FPPX202	VBN2FPSXA202	VBN2FPPX102	VBN2FPSXA102	
		71	VBN2FRPX7202	VBN2FRSX7202	VBN2FRPX7102	VBN2FRSX7102	VBN2FRPX202	VBN2FRSXA202	VBN2FRPX102	VBN2FRSXA102	
		100	VBN2FSPX7202	VBN2FSSX7202	VBN2FSPX7102	VBN2FSSX7102	VBN2FSPX202	VBN2FSSXA202	VBN2FSPX102	VBN2FSSXA102	
		108*	VBN2FTPX7202	VBN2FTSX7202	VBN2FTPX7102	VBN2FTSX7102	VBN2FTPX202	VBN2FTSXA202	VBN2FTPX102	VBN2FTSXA102	
		210	VBN2F1PX7202	VBN2F1SX7202	VBN2F1PX7102	VBN2F1SX7102	VBN2F1PX202	VBN2F1SXA202	VBN2F1PX102	VBN2F1SXA102	
		266*	VBN2F2PX7202	VBN2F2SX7202	VBN2F2PX7102	VBN2F2SX7102	VBN2F2PX202	VBN2F2SXA202	VBN2F2PX102	VBN2F2SXA102	
		45	VBN2GNPX7202	VBN2GNSX7202	VBN2GNPX7102	VBN2GNSX7102	VBN2GNPX202	VBN2GNSXA202	VBN2GNPX102	VBN2GNSXA102	
		55	VBN2GPPX7202	VBN2GPSX7202	VBN2GPPX7102	VBN2GPSX7102	VBN2GPPX202	VBN2GPSXA202	VBN2GPPX102	VBN2GPSXA102	
		72	VBN2GRPX7202	VBN2GRSX7202	VBN2GRPX7102	VBN2GRSX7102	VBN2GRPX202	VBN2GRSXA202	VBN2GRPX102	VBN2GRSXA102	
		101	VBN2GSPX7202	VBN2GSSX7202	VBN2GSPX7102	VBN2GSSX7102	VBN2GSPX202	VBN2GSSXA202	VBN2GSPX102	VBN2GSSXA102	
		162	VBN2GUPX7202	VBN2GUSX7202	VBN2GUPX7102	VBN2GUSX7102	VBN2GUPX202	VBN2GUSXA202	VBN2GUPX102	VBN2GUSXA102	
		202*	VBN2G1PX7202	VBN2G1SX7202	VBN2G1PX7102	VBN2G1SX7102	VBN2G1PX202	VBN2G1SXA202	VBN2G1PX102	VBN2G1SXA102	
3"	100	49	VBN2HNPX7202	VBN2HNSX7202	VBN2HNPX7102	VBN2HNSX7102	VBN2HNPX202	VBN2HNSXA202	VBN2HNPX102	VBN2HNSXA102	
		63	VBN2HPPX7202	VBN2HPSX7202	VBN2HPPX7102	VBN2HPSX7102	VBN2HPPX202	VBN2HPSXA202	VBN2HPPX102	VBN2HPSXA102	
		82	VBN2HRPX7202	VBN2HRSX7202	VBN2HRPX7102	VBN2HRSX7102	VBN2HRPX202	VBN2HRSXA202	VBN2HRPX102	VBN2HRSXA102	
		124	VBN2HTPX7202	VBN2HTSX7202	VBN2HTPX7102	VBN2HTSX7102	VBN2HTPX202	VBN2HTSXA202	VBN2HTPX102	VBN2HTSXA102	
		145*	VBN2HUPX7202	VBN2HUSX7202	VBN2HUPX7102	VBN2HUSX7102	VBN2HUPX202	VBN2HUSXA202	VBN2HUPX102	VBN2HUSXA102	

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 2-Way NPT Valves 1/2"- 3", NEMA 3R

Actuator Features			Fail Safe							
Actuator O.S. Number			MS4105A1030				MS4105A1130			
Power Supply	Voltage		100-250 VAC				100-250 VAC			
	Frequency		50 / 60 Hz				50 / 60 Hz			
	Power		6 VA				6 VA			
Actuator Torque	(lb.-in.)		44				44			
	(0)2-10 Vdc									
	4-20 mA (external 500 Ohm Resistor)									
Control	Floating									
	Two-Position SPDT									
	Two-Position SPST									
Actuator Stroke	(degrees)		95° ± 3°				95° ± 3°			
	(drive/spring return, seconds)		45 / 25				45 / 25			
Timing			0				1			
Aux Switch										
Feedback	2-10 Vdc Built In									
Fail Safe Action			Closed		Open		Closed		Open	
Normal Position (no signal)			Closed		Open		Closed		Open	
Valve Features	Trim		Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel	Nickel-Plated Brass	Stainless Steel
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes							
1/2"	130	0.38	VBN2ABPX8202	VBN2ABSX8202	VBN2ABPX8102	VBN2ABSX8102	VBN2ABPX9202	VBN2ABSX9202	VBN2ABPX9102	VBN2ABSX9102
		0.68	VBN2ADPX8202	VBN2ADSX8202	VBN2ADPX8102	VBN2ADSX8102	VBN2ADPX9202	VBN2ADSX9202	VBN2ADPX9102	VBN2ADSX9102
		1.3	VBN2AEPX8202	VBN2AESX8202	VBN2AEPX8102	VBN2AESX8102	VBN2AEPX9202	VBN2AESX9202	VBN2AEPX9102	VBN2AESX9102
		2	VBN2AFPX8202	VBN2AFSX8202	VBN2AFPX8102	VBN2AFSX8102	VBN2AFPX9202	VBN2AFSX9202	VBN2AFPX9102	VBN2AFSX9102
		2.6	VBN2AGPX8202	VBN2AGSX8202	VBN2AGPX8102	VBN2AGSX8102	VBN2AGPX9202	VBN2AGSX9202	VBN2AGPX9102	VBN2AGSX9102
		4.7	VBN2AHPX8202	VBN2AHSX8202	VBN2AHPX8102	VBN2AHSX8102	VBN2AHPX9202	VBN2AHSX9202	VBN2AHPX9102	VBN2AHSX9102
		8	VBN2AJPX8202	VBN2AJSX8202	VBN2AJPX8102	VBN2AJSX8102	VBN2AJPX9202	VBN2AJSX9202	VBN2AJPX9102	VBN2AJSX9102
		11.7*	VBN2AKPX8202	VBN2AKSX8202	VBN2AKPX8102	VBN2AKSX8102	VBN2AKPX9202	VBN2AKSX9202	VBN2AKPX9102	VBN2AKSX9102
		0.31	VBN2BPPX8202	VBN2BBSX8202	VBN2BPPX8102	VBN2BBSX8102	VBN2BPPX9202	VBN2BBSX9202	VBN2BPPX9102	VBN2BBSX9102
		0.63	VBN2BDPX8202	VBN2BDSX8202	VBN2BDPX8102	VBN2BDSX8102	VBN2BDPX9202	VBN2BDSX9202	VBN2BDPX9102	VBN2BDSX9102
3/4"	130	1.2	VBN2BEPX8202	VBN2BESX8202	VBN2BEPX8102	VBN2BESX8102	VBN2BEPX9202	VBN2BESX9202	VBN2BEPX9102	VBN2BESX9102
		2.5	VBN2BGPX8202	VBN2BGSX8202	VBN2BGPX8102	VBN2BGSX8102	VBN2BGPX9202	VBN2BGSX9202	VBN2BGPX9102	VBN2BGSX9102
		4.3	VBN2BHPX8202	VBN2BHSX8202	VBN2BHPX8102	VBN2BHSX8102	VBN2BHPX9202	VBN2BHSX9202	VBN2BHPX9102	VBN2BHSX9102
		7.4	VBN2BJPX8202	VBN2BJSX8202	VBN2BJPX8102	VBN2BJSX8102	VBN2BJPX9202	VBN2BJSX9202	VBN2BJPX9102	VBN2BJSX9102
		10.1	VBN2BKPX8202	VBN2BKSX8202	VBN2BKPX8102	VBN2BKSX8102	VBN2BKPX9202	VBN2BKSX9202	VBN2BKPX9102	VBN2BKSX9102
		14.7*	VBN2BLPX8202	VBN2BLSX8202	VBN2BLPX8102	VBN2BLSX8102	VBN2BLPX9202	VBN2BLSX9202	VBN2BLPX9102	VBN2BLSX9102
		29*	VBN2BMPX8202	VBN2BMSX8202	VBN2BMPX8102	VBN2BMSX8102	VBN2BMPX9202	VBN2BMSX9202	VBN2BMPX9102	VBN2BMSX9102
		4.4	VBN2CHPX8202	VBN2CHSX8202	VBN2CHPX8102	VBN2CHSX8102	VBN2CHPX9202	VBN2CHSX9202	VBN2CHPX9102	VBN2CHSX9102
		9	VBN2CJPX8202	VBN2CJSX8202	VBN2CJPX8102	VBN2CJSX8102	VBN2CJPX9202	VBN2CJSX9202	VBN2CJPX9102	VBN2CJSX9102
		15.3	VBN2CLPX8202	VBN2CLSX8202	VBN2CLPX8102	VBN2CLSX8102	VBN2CLPX9202	VBN2CLSX9202	VBN2CLPX9102	VBN2CLSX9102
1"	100	26	VBN2CMPX8202	VBN2CMSX8202	VBN2CMPX8102	VBN2CMSX8102	VBN2CMPX9202	VBN2CMSX9202	VBN2CMPX9102	VBN2CMSX9102
		44*	VBN2CNPX8202	VBN2CNSX8202	VBN2CNPX8102	VBN2CNSX8102	VBN2CNPX9202	VBN2CNSX9202	VBN2CNPX9102	VBN2CNSX9102
		54*	VBN2CPPX8202	VBN2CPSX8202	VBN2CPPX8102	VBN2CPSX8102	VBN2CPPX9202	VBN2CPSX9202	VBN2CPPX9102	VBN2CPSX9102
		4.4	VBN2DHPX8202	VBN2DHSX8202	VBN2DHPX8102	VBN2DHSX8102	VBN2DHPX9202	VBN2DHSX9202	VBN2DHPX9102	VBN2DHSX9102
		8.3	VBN2DJPX8202	VBN2DJSX8202	VBN2DJPX8102	VBN2DJSX8102	VBN2DJPX9202	VBN2DJSX9202	VBN2DJPX9102	VBN2DJSX9102
		14.9	VBN2DKPX8202	VBN2DKSX8202	VBN2DKPX8102	VBN2DKSX8102	VBN2DKPX9202	VBN2DKSX9202	VBN2DKPX9102	VBN2DKSX9102
		25	VBN2DLPX8202	VBN2DLSX8202	VBN2DLPX8102	VBN2DLSX8102	VBN2DLPX9202	VBN2DLSX9202	VBN2DLPX9102	VBN2DLSX9102
		37	VBN2DMPX8202	VBN2DMSX8202	VBN2DMPX8102	VBN2DMSX8102	VBN2DMPX9202	VBN2DMSX9202	VBN2DMPX9102	VBN2DMSX9102
		41*	VBN2DNPX8202	VBN2DNSX8202	VBN2DNPX8102	VBN2DNSX8102	VBN2DNPX9202	VBN2DNSX9202	VBN2DNPX9102	VBN2DNSX9102
		102*	VBN2DSPX8202	VBN2DSSX8202	VBN2DSPX8102	VBN2DSSX8102	VBN2DSPX9202	VBN2DSSX9202	VBN2DSPX9102	VBN2DSSX9102
1-1/2"	100	23	VBN2ELPX8202	VBN2ELSX8202	VBN2ELPX8102	VBN2ELSX8102	VBN2ELPX9202	VBN2ELSX9202	VBN2ELPX9102	VBN2ELSX9102
		30	VBN2EMPX8202	VBN2EMSX8202	VBN2EMPX8102	VBN2EMSX8102	VBN2EMPX9202	VBN2EMSX9202	VBN2EMPX9102	VBN2EMSX9102
		41	VBN2ENPX8202	VBN2ENSX8202	VBN2ENPX8102	VBN2ENSX8102	VBN2ENPX9202	VBN2ENSX9202	VBN2ENPX9102	VBN2ENSX9102
		74*	VBN2ERPX8202	VBN2ERSX8202	VBN2ERPX8102	VBN2ERSX8102	VBN2ERPX9202	VBN2ERSX9202	VBN2ERPX9102	VBN2ERSX9102
		172*	VBN2E1PX8202	VBN2E1SX8202	VBN2E1PX8102	VBN2E1SX8102	VBN2E1PX9202	VBN2E1SX9202	VBN2E1PX9102	VBN2E1SX9102
		42	VBN2FNPX8202	VBN2FNSX8202	VBN2FNPX8102	VBN2FNSX8102	VBN2FNPX9202	VBN2FNSX9202	VBN2FNPX9102	VBN2FNSX9102
		57	VBN2FPPX8202	VBN2FPSX8202	VBN2FPPX8102	VBN2FPSX8102	VBN2FPPX9202	VBN2FPSX9202	VBN2FPPX9102	VBN2FPSX9102
		71	VBN2FRPX8202	VBN2FRSX8202	VBN2FRPX8102	VBN2FRSX8102	VBN2FRPX9202	VBN2FRSX9202	VBN2FRPX9102	VBN2FRSX9102
		100	VBN2FSPX8202	VBN2FSSX8202	VBN2FSPX8102	VBN2FSSX8102	VBN2FSPX9202	VBN2FSSX9202	VBN2FSPX9102	VBN2FSSX9102
		108*	VBN2FTPX8202	VBN2FTSX8202	VBN2FTPX8102	VBN2FTSX8102	VBN2FTPX9202	VBN2FTSX9202	VBN2FTPX9102	VBN2FTSX9102
2"	100	210	VBN2F1PX8202	VBN2F1SX8202	VBN2F1PX8102	VBN2F1SX8102	VBN2F1PX9202	VBN2F1SX9202	VBN2F1PX9102	VBN2F1SX9102
		266*	VBN2F2PX8202	VBN2F2SX8202	VBN2F2PX8102	VBN2F2SX8102	VBN2F2PX9202	VBN2F2SX9202	VBN2F2PX9102	VBN2F2SX9102
		45	VBN2GNPX8202	VBN2GNSX8202	VBN2GNPX8102	VBN2GNSX8102	VBN2GNPX9202	VBN2GNSX9202	VBN2GNPX9102	VBN2GNSX9102
		55	VBN2GPPX8202	VBN2GPSX8202	VBN2GPPX8102	VBN2GPSX8102	VBN2GPPX9202	VBN2GPSX9202	VBN2GPPX9102	VBN2GPSX9102
		72	VBN2GRPX8202	VBN2GRSX8202	VBN2GRPX8102	VBN2GRSX8102	VBN2GRPX9202	VBN2GRSX9202	VBN2GRPX9102	VBN2GRSX9102
		101	VBN2GSPX8202	VBN2GSSX8202	VBN2GSPX8102	VBN2GSSX8102	VBN2GSPX9202	VBN2GSSX9202	VBN2GSPX9102	VBN2GSSX9102
		162	VBN2GUPX8202	VBN2GUSX8202	VBN2GUPX8102	VBN2GUSX8102	VBN2GUPX9202	VBN2GUSX9202	VBN2GUPX9102	VBN2GUSX9102
		202*	VBN2G1PX8202	VBN2G1SX8202	VBN2G1PX8102	VBN2G1SX8102	VBN2G1PX9202	VBN2G1SX9202	VBN2G1PX9102	VBN2G1SX9102
		49	VBN2HNPX8202	VBN2HNSX8202	VBN2HNPX8102	VBN2HNSX8102	VBN2HNPX9202	VBN2HNSX9202	VBN2HNPX9102	VBN2HNSX9102
		63	VBN2HPPX8202	VBN2HPSX8202	VBN2HPPX8102	VBN2HPSX8102	VBN2HPPX9202	VBN2HPSX9202	VBN2HPPX9102	VBN2HPSX9102
3"	100	82	VBN2HRPX8202	VBN2HRSX8202	VBN2HRPX8102	VBN2HRSX8102	VBN2HRPX9202	VBN2HRSX9202	VBN2HRPX9102	VBN2HRSX9102
		124	VBN2HTPX8202	VBN2HTSX8202	VBN2HTPX8102	VBN2HTSX8102	VBN2HTPX9202	VBN2HTSX9202	VBN2HTPX9102	VBN2HTSX9102
		145*	VBN2HUPX8202	VBN2HUSX8202	VBN2HUPX8102	VBN2HUSX8102	VBN2HUPX9202	VBN2HUSX9202	VBN2HUPX9102	VBN2HUSX9102

\* Full port ball. No flow characterizing insert.

## PRODUCT SELECTION - VALVES

3-Way NPT Control Ball Valves 1/2"-1 1/4", NEMA2

Actuator Features			Fail Safe			
Actuator O.S. Number			MS3103J1023		MS3103J1223	
Power Supply			24 VAC/DC		24 VAC/DC	
Voltage			50 / 60 Hz		50 / 60 Hz	
Frequency			4.5 VA		4.5 VA	
Power			27		27	
Actuator Torque (lb.-in.)						
Control (O)2-10 Vdc						
4-20 mA (external 500 Ohm Resistor)						
Sylk			•		•	
Two-Position SPDT						
Two-Position SPST						
Actuator Stroke (degrees)			95° ± 3°		95° ± 3°	
Timing (drive/spring return, seconds)			30-180 / 25		30-180 / 25	
Aux Switch			0		2	
Feedback			Sylk		Sylk	
Fail Safe Action			B-AB Open (FSB)	A-AB Open (FSA)	B-AB Open (FSB)	A-AB Open (FSA)
Normal Position (no signal)			B-AB Open	A-AB Open	B-AB Open	A-AB Open
Valve Features			Nickel-Plated Brass		Nickel-Plated Brass	
Trim						
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes			
1/2"	50	0.33	VBN3ABPXG301	VBN3ABPXG401	VBN3ABPXH301	VBN3ABPXH401
		0.59	VBN3ACPXG301	VBN3ACPXG401	VBN3ACPXH301	VBN3ACPXH401
		1	VBN3AEPXG301	VBN3AEPXG401	VBN3AEPXH301	VBN3AEPXH401
		2.4	VBN3AFPXG301	VBN3AFPXG401	VBN3AFPXH301	VBN3AFPXH401
		4.3	VBN3AHPXG301	VBN3AHPXG401	VBN3AHPXH301	VBN3AHPXH401
		8*	VBN3AJPXG301	VBN3AJPXG401	VBN3AJPXH301	VBN3AJPXH401
3/4"	50	0.4	VBN3BCPXG301	VBN3BCPXG401	VBN3BCPXH301	VBN3BCPXH401
		0.66	VBN3BDPXG301	VBN3BDPXG401	VBN3BDPXH301	VBN3BDPXH401
		1.3	VBN3BEPXG301	VBN3BEPXG401	VBN3BEPXH301	VBN3BEPXH401
		2.4	VBN3BFPXG301	VBN3BFPXG401	VBN3BFPXH301	VBN3BFPXH401
		3.8	VBN3BGPXG301	VBN3BGPXG401	VBN3BGPXH301	VBN3BGPXH401
		7	VBN3BJPXG301	VBN3BJPXG401	VBN3BJPXH301	VBN3BJPXH401
1"	50	11*	VBN3BKPXG301	VBN3BKPXG401	VBN3BKPXH301	VBN3BKPXH401
		0.4	VBN3CCPXG301	VBN3CCPXG401	VBN3CCPXH301	VBN3CCPXH401
		0.65	VBN3CDPXG301	VBN3CDPXG401	VBN3CDPXH301	VBN3CDPXH401
		1.3	VBN3CEPXG301	VBN3CEPXG401	VBN3CEPXH301	VBN3CEPXH401
		2.3	VBN3CFPXG301	VBN3CFPXG401	VBN3CFPXH301	VBN3CFPXH401
		3.5	VBN3CGPXG301	VBN3CGPXG401	VBN3CGPXH301	VBN3CGPXH401
		4.5	VBN3CHPXG301	VBN3CHPXG401	VBN3CHPXH301	VBN3CHPXH401
		8.6	VBN3CJPG301	VBN3CJPG401	VBN3CJPH301	VBN3CJPH401
		14.9	VBN3CKPXG301	VBN3CKPXG401	VBN3CKPXH301	VBN3CKPXH401
		22*	VBN3CLPXG301	VBN3CLPXG401	VBN3CLPXH301	VBN3CLPXH401
31*	VBN3CMPXG301	VBN3CMPXG401	VBN3CMPXH301	VBN3CMPXH401		
1-1/4"	40	4.1	VBN3DHPXG301	VBN3DHPXG401	VBN3DHPXH301	VBN3DHPXH401
		8.7	VBN3DJPXG301	VBN3DJPXG401	VBN3DJPXH301	VBN3DJPXH401
		12.7	VBN3DKPXG301	VBN3DKPXG401	VBN3DKPXH301	VBN3DKPXH401
		19.4*	VBN3DLPXG301	VBN3DLPXG401	VBN3DLPXH301	VBN3DLPXH401
		27	VBN3DMPXG301	VBN3DMPXG401	VBN3DMPXH301	VBN3DMPXH401
		34*	VBN3DNPXG301	VBN3DNPXG401	VBN3DNPXH301	VBN3DNPXH401

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 3-Way NPT Control Ball Valves 1/2"-2 1/2", NEMA2

Actuator Features			Non Fail Safe				Valve Only
Actuator O.S. Number		MN6105A1011	MN6105A1201	MN7505A2001	MN7505A2209		N/A
Power Supply	Voltage	24 VAC/DC	24 VAC/DC	24 VAC/DC	24 VAC/DC		
	Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz		
	Power	5 VA	5 VA	5 VA	5 VA		
Actuator Torque	(lb.-in.)	44	44	44	44		
Control	(0)2-10 Vdc						
	4-20 mA (external 500 Ohm Resistor)						
	Floating	•	•	•	•		
	Two-Position SPDT	•	•	•	•		
	Two-Position SPST						
Actuator Stroke	(degrees)	95° ± 3°	95° ± 3°	95° ± 3°	95° ± 3°		
Timing	(drive/spring return, seconds)	90	90	90	90		
Aux Switch		0	2	0	2		
Feedback	2-10 Vdc Built In			•	•		
Fail Safe Action		Stay in Place	Stay in Place	Stay in Place	Stay in Place		
Normal Position (no signal)		Stay in Place	Stay in Place	A-AB Open	A-AB Open		
Valve Features	Trim	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass		Nickel-Plated Brass
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes				
1/2"	50	0.33	VBN3ABPX4000	VBN3ABPXC000	VBN3ABPX5000	VBN3ABPXD000	VBN3ABPX0000
		0.59	VBN3ACPX4000	VBN3ACPXC000	VBN3ACPX5000	VBN3ACPXD000	VBN3ACPX0000
		1	VBN3AEPX4000	VBN3AEPXC000	VBN3AEPX5000	VBN3AEPXD000	VBN3AEPX0000
		2.4	VBN3AFPX4000	VBN3AFPXC000	VBN3AFPX5000	VBN3AFPXD000	VBN3AFPX0000
		4.3	VBN3AHPX4000	VBN3AHPXC000	VBN3AHPX5000	VBN3AHPXD000	VBN3AHPX0000
8*	VBN3AJPX4000	VBN3AJPXC000	VBN3AJPX5000	VBN3AJPXD000	VBN3AJPX0000		
3/4"	50	0.4	VBN3BCPX4000	VBN3BCPXC000	VBN3BCPX5000	VBN3BCPXD000	VBN3BCPX0000
		0.66	VBN3BDPX4000	VBN3BDPXC000	VBN3BDPX5000	VBN3BDPXD000	VBN3BDPX0000
		1.3	VBN3BEPX4000	VBN3BEPXC000	VBN3BEPX5000	VBN3BEPXD000	VBN3BEPX0000
		2.4	VBN3BFPX4000	VBN3BFPXC000	VBN3BFPX5000	VBN3BFPXD000	VBN3BFPX0000
		3.8	VBN3BGPX4000	VBN3BGPXC000	VBN3BGPX5000	VBN3BGPXD000	VBN3BGPX0000
7	VBN3BJPX4000	VBN3BJPXC000	VBN3BJPX5000	VBN3BJPXD000	VBN3BJPX0000		
11*	VBN3BKPX4000	VBN3BKPXC000	VBN3BKPX5000	VBN3BKPXD000	VBN3BKPX0000		
1"	50	0.4	VBN3CCPX4000	VBN3CCPXC000	VBN3CCPX5000	VBN3CCPXD000	VBN3CCPX0000
		0.65	VBN3CDPX4000	VBN3CDPXC000	VBN3CDPX5000	VBN3CDPXD000	VBN3CDPX0000
		1.3	VBN3CEPX4000	VBN3CEPXC000	VBN3CEPX5000	VBN3CEPXD000	VBN3CEPX0000
		2.3	VBN3CFPX4000	VBN3CFPXC000	VBN3CFPX5000	VBN3CFPXD000	VBN3CFPX0000
		3.5	VBN3CGPX4000	VBN3CGPXC000	VBN3CGPX5000	VBN3CGPXD000	VBN3CGPX0000
		4.5	VBN3CHPX4000	VBN3CHPXC000	VBN3CHPX5000	VBN3CHPXD000	VBN3CHPX0000
		8.6	VBN3CJPX4000	VBN3CJPXC000	VBN3CJPX5000	VBN3CJPXD000	VBN3CJPX0000
		14.9	VBN3CKPX4000	VBN3CKPXC000	VBN3CKPX5000	VBN3CKPXD000	VBN3CKPX0000
		22*	VBN3CLPX4000	VBN3CLPXC000	VBN3CLPX5000	VBN3CLPXD000	VBN3CLPX0000
		31*	VBN3CMPX4000	VBN3CMPXC000	VBN3CMPX5000	VBN3CMPXD000	VBN3CMPX0000
1-1/4"	40	4.1	VBN3DHPX4000	VBN3DHPXC000	VBN3DHPX5000	VBN3DHPXD000	VBN3DHPX0000
		8.7	VBN3DJPX4000	VBN3DJPXC000	VBN3DJPX5000	VBN3DJPXD000	VBN3DJPX0000
		12.7	VBN3DKPX4000	VBN3DKPXC000	VBN3DKPX5000	VBN3DKPXD000	VBN3DKPX0000
		19.4*	VBN3DLPX4000	VBN3DLPXC000	VBN3DLPX5000	VBN3DLPXD000	VBN3DLPX0000
		27	VBN3DMPX4000	VBN3DMPXC000	VBN3DMPX5000	VBN3DMPXD000	VBN3DMPX0000
34*	VBN3DNPX4000	VBN3DNPXC000	VBN3DNPX5000	VBN3DNPXD000	VBN3DNPX0000		
1-1/2"	40	4	VBN3EHPX4000	VBN3EHPXC000	VBN3EHPX5000	VBN3EHPXD000	VBN3EHPX0000
		8.3	VBN3EJPX4000	VBN3EJPXC000	VBN3EJPX5000	VBN3EJPXD000	VBN3EJPX0000
		13.4	VBN3EKPX4000	VBN3EKPXC000	VBN3EKPX5000	VBN3EKPXD000	VBN3EKPX0000
		24	VBN3ELPX4000	VBN3ELPXC000	VBN3ELPX5000	VBN3ELPXD000	VBN3ELPX0000
		32*	VBN3EMPX4000	VBN3EMPXC000	VBN3EMPX5000	VBN3EMPXD000	VBN3EMPX0000
61*	VBN3EPPX4000	VBN3EPPXC000	VBN3EPPX5000	VBN3EPPXD000	VBN3EPPX0000		
2"	40	24	VBN3FLPX4000	VBN3FLPXC000	VBN3FLPX5000	VBN3FLPXD000	VBN3FLPX0000
		38	VBN3FNPX4000	VBN3FNXPXC000	VBN3FNPX5000	VBN3FNPD000	VBN3FNPX0000
		57*	VBN3FPPX4000	VBN3FPPXC000	VBN3FPPX5000	VBN3FPPXD000	VBN3FPPX0000
		83	VBN3FRPX4000	VBN3FRPXC000	VBN3FRPX5000	VBN3FRPXD000	VBN3FRPX0000
		109*	VBN3FTPX4000	VBN3FTPXC000	VBN3FTPX5000	VBN3FTPXD000	VBN3FTPX0000
2-1/2"	40	38	VBN3GNPX4000	VBN3GNPXC000	VBN3GNPX5000	VBN3GNPXD000	VBN3GNPX0000
		74	VBN3GRPX4000	VBN3GRPXC000	VBN3GRPX5000	VBN3GRPXD000	VBN3GRPX0000
		100*	VBN3GSPX4000	VBN3GSPXC000	VBN3GSPX5000	VBN3GSPXD000	VBN3GSPX0000

\* Full port ball. No flow characterizing insert.

## PRODUCT SELECTION - VALVES

3-Way NPT Control Ball Valves 1/2"-1 1/4", NEMA2

Actuator Features			Fail Safe			
Actuator O.S. Number			MS7103A2024		MS7103A2224	
Power Supply		Voltage	24 VAC/DC		24 VAC/DC	
		Frequency	50 / 60 Hz		50 / 60 Hz	
		Power	4 VA		4 VA	
Actuator Torque		(lb.-in.)	27		27	
Control		(O)2-10 Vdc	•		•	
		4-20 mA (external 500 Ohm Resistor)	•		•	
		Floating	•		•	
		Two-Position SPDT	•		•	
		Two-Position SPST				
Actuator Stroke		(degrees)	95° ± 3°		95° ± 3°	
Timing		(drive/spring return, seconds)	90 / 25		90 / 25	
Aux Switch			0		2	
Feedback		2-10 Vdc Built In	•		•	
Fail Safe Action			B-AB Open (FSB)	A-AB Open (FSA)	B-AB Open (FSB)	A-AB Open (FSA)
Normal Position (no signal)			B-AB Open	A-AB Open	B-AB Open	A-AB Open
Valve Features		Trim	Nickel-Plated Brass		Nickel-Plated Brass	
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes			
1/2"	50	0.33	VBN3ABPX401	VBN3ABPX301	VBN3ABPXF401	VBN3ABPXF301
		0.59	VBN3ACPX401	VBN3ACPX301	VBN3ACPXF401	VBN3ACPXF301
		1	VBN3AEPX401	VBN3AEPX301	VBN3AEPXF401	VBN3AEPXF301
		2.4	VBN3AFPX401	VBN3AFPX301	VBN3AFPXF401	VBN3AFPXF301
		4.3	VBN3AHPX401	VBN3AHPX301	VBN3AHPXF401	VBN3AHPXF301
		8*	VBN3AJPX401	VBN3AJPX301	VBN3AJPXF401	VBN3AJPXF301
3/4"	50	0.4	VBN3BCPX401	VBN3BCPX301	VBN3BCPXF401	VBN3BCPXF301
		0.66	VBN3BDPX401	VBN3BDPX301	VBN3BDPXF401	VBN3BDPXF301
		1.3	VBN3BEPX401	VBN3BEPX301	VBN3BEPXF401	VBN3BEPXF301
		2.4	VBN3BFPX401	VBN3BFPX301	VBN3BFPXF401	VBN3BFPXF301
		3.8	VBN3BGPX401	VBN3BGPX301	VBN3BGPXF401	VBN3BGPXF301
		7	VBN3BJPX401	VBN3BJPX301	VBN3BJPXF401	VBN3BJPXF301
1"	50	11*	VBN3BKPX401	VBN3BKPX301	VBN3BKPF401	VBN3BKPF301
		0.4	VBN3CCPX401	VBN3CCPX301	VBN3CCPXF401	VBN3CCPXF301
		0.65	VBN3CDPX401	VBN3CDPX301	VBN3CDPXF401	VBN3CDPXF301
		1.3	VBN3CEPX401	VBN3CEPX301	VBN3CEPXF401	VBN3CEPXF301
		2.3	VBN3CFPX401	VBN3CFPX301	VBN3CFPXF401	VBN3CFPXF301
		3.5	VBN3CGPX401	VBN3CGPX301	VBN3CGPXF401	VBN3CGPXF301
		4.5	VBN3CHPX401	VBN3CHPX301	VBN3CHPXF401	VBN3CHPXF301
		8.6	VBN3CJPX401	VBN3CJPX301	VBN3CJPXF401	VBN3CJPXF301
		14.9	VBN3CKPX401	VBN3CKPX301	VBN3CKPXF401	VBN3CKPXF301
		22*	VBN3CLPX401	VBN3CLPX301	VBN3CLPXF401	VBN3CLPXF301
31*	VBN3CMPX401	VBN3CMPX301	VBN3CMPXF401	VBN3CMPXF301		
1-1/4"	40	4.1	VBN3DHPX401	VBN3DHPX301	VBN3DHPXF401	VBN3DHPXF301
		8.7	VBN3DJPX401	VBN3DJPX301	VBN3DJPXF401	VBN3DJPXF301
		12.7	VBN3DKPX401	VBN3DKPX301	VBN3DKPXF401	VBN3DKPXF301
		19.4*	VBN3DLPX401	VBN3DLPX301	VBN3DLPXF401	VBN3DLPXF301
		27	VBN3DMPX401	VBN3DMPX301	VBN3DMPXF401	VBN3DMPXF301
		34*	VBN3DNPX401	VBN3DNPX301	VBN3DNPXF401	VBN3DNPXF301

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 3-Way NPT Control Ball Valves 1½"-2½", NEMA2

Actuator Features			Fail Safe			
Actuator O.S. Number			MS7505A2030		MS7505A2130	
Power Supply	Voltage		24 VAC/DC		24 VAC/DC	
	Frequency		50 / 60 Hz		50 / 60 Hz	
	Power		6 VA		6 VA	
Actuator Torque	(lb.-in.)		44		44	
Control	(O)2-10 Vdc		•		•	
	4-20 mA (external 500 Ohm Resistor)		•		•	
	Floating		•		•	
	Two-Position SPDT		•		•	
	Two-Position SPST		•		•	
Actuator Stroke	(degrees)		95° ± 3°		95° ± 3°	
Timing	(drive/spring return, seconds)		90 / 25		90 / 25	
Aux Switch			0		1	
Feedback	2-10 Vdc Built In		•		•	
Fail Safe Action			B-AB Open (FSB)	A-AB Open (FSA)	B-AB Open (FSB)	A-AB Open (FSA)
Normal Position (no signal)			B-AB Open	A-AB Open	B-AB Open	A-AB Open
Valve Features	Trim		Nickel-Plated Brass		Nickel-Plated Brass	
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes			
3-Way 1-1/2"	40	4	VBN3EHPX6400	VBN3EHPX6300	VBN3EHPXB400	VBN3EHPXB300
		8.3	VBN3EJXP6400	VBN3EJXP6300	VBN3EJXPB400	VBN3EJXPB300
		13.4	VBN3EKPX6400	VBN3EKPX6300	VBN3EKPXB400	VBN3EKPXB300
		24	VBN3ELPX6400	VBN3ELPX6300	VBN3ELXPB400	VBN3ELXPB300
		32*	VBN3EMPX6400	VBN3EMPX6300	VBN3EMPXB400	VBN3EMPXB300
		61*	VBN3EPPX6400	VBN3EPPX6300	VBN3EPPXB400	VBN3EPPXB300
2"	40	24	VBN3FLPX6400	VBN3FLPX6300	VBN3FLXPB400	VBN3FLXPB300
		38	VBN3FNXP6400	VBN3FNXP6300	VBN3FNXPB400	VBN3FNXPB300
		57*	VBN3FPPX6400	VBN3FPPX6300	VBN3FPPXB400	VBN3FPPXB300
		83	VBN3FRPX6400	VBN3FRPX6300	VBN3FRXPB400	VBN3FRXPB300
		109*	VBN3FTPX6400	VBN3FTPX6300	VBN3FTXPB400	VBN3FTXPB300
2-1/2"	40	38	VBN3GNPX6400	VBN3GNPX6300	VBN3GNXPB400	VBN3GNXPB300
		74	VBN3GRPX6400	VBN3GRPX6300	VBN3GRXPB400	VBN3GRXPB300
		100*	VBN3GSPX6400	VBN3GSPX6300	VBN3GSPXB400	VBN3GSPXB300

\* Full port ball. No flow characterizing insert.



# PRODUCT SELECTION - VALVES

## 3-Way NPT Control Ball Valves 1/2"-2 1/2", NEMA2

Actuator Features			Fail Safe							
Actuator O.S. Number			MS8105A1030		MS8105A1130		MS4105A1030		MS4105A1130	
Power Supply	Voltage		24 VAC/DC		24 VAC/DC		100-250 VAC		100-250 VAC	
	Frequency		50 / 60 Hz		50 / 60 Hz		50 / 60 Hz		50 / 60 Hz	
	Power		6 VA		6 VA		6 VA		6 VA	
Actuator Torque	(lb.-in.)		44		44		44		44	
Control	(O)2-10 Vdc									
	4-20 mA (external 500 Ohm Resistor)									
	Floating									
	Two-Position SPDT									
	Two-Position SPST		•		•		•		•	
Actuator Stroke	(degrees)		95° ± 3°		95° ± 3°		95° ± 3°		95° ± 3°	
Timing	(drive/spring return, seconds)		45 / 25		45 / 25		45 / 25		45 / 25	
Aux Switch			0		1		0		1	
Feedback	2-10 Vdc Built In									
Fail Safe Action			B-AB Open (FSB)	A-AB Open (FSA)	B-AB Open (FSB)	A-AB Open (FSA)	B-AB Open (FSB)	A-AB Open (FSA)	B-AB Open (FSB)	A-AB Open (FSA)
Normal Position (no signal)			B-AB Open	A-AB Open	B-AB Open	A-AB Open	B-AB Open	A-AB Open	B-AB Open	A-AB Open
Valve Features	Trim		Nickel-Plated Brass		Nickel-Plated Brass		Nickel-Plated Brass		Nickel-Plated Brass	
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes							
1/2"	50	0.33	VBN3ABPX7400	VBN3ABPX7300	VBN3ABPXA400	VBN3ABPXA300	VBN3ABPX8400	VBN3ABPX8300	VBN3ABPX9400	VBN3ABPX9300
		0.59	VBN3ACPX7400	VBN3ACPX7300	VBN3ACPXA400	VBN3ACPXA300	VBN3ACPX8400	VBN3ACPX8300	VBN3ACPX9400	VBN3ACPX9300
		1	VBN3AEPX7400	VBN3AEPX7300	VBN3AEPXA400	VBN3AEPXA300	VBN3AEPX8400	VBN3AEPX8300	VBN3AEPX9400	VBN3AEPX9300
		2.4	VBN3AFPX7400	VBN3AFPX7300	VBN3AFPXA400	VBN3AFPXA300	VBN3AFPX8400	VBN3AFPX8300	VBN3AFPX9400	VBN3AFPX9300
		4.3	VBN3AHPX7400	VBN3AHPX7300	VBN3AHPXA400	VBN3AHPXA300	VBN3AHPX8400	VBN3AHPX8300	VBN3AHPX9400	VBN3AHPX9300
3/4"	50	8*	VBN3AJPX7400	VBN3AJPX7300	VBN3AJPXA400	VBN3AJPXA300	VBN3AJPX8400	VBN3AJPX8300	VBN3AJPX9400	VBN3AJPX9300
		0.4	VBN3BCPX7400	VBN3BCPX7300	VBN3BCPXA400	VBN3BCPXA300	VBN3BCPX8400	VBN3BCPX8300	VBN3BCPX9400	VBN3BCPX9300
		0.66	VBN3BDPX7400	VBN3BDPX7300	VBN3BDPXA400	VBN3BDPXA300	VBN3BDPX8400	VBN3BDPX8300	VBN3BDPX9400	VBN3BDPX9300
		1.3	VBN3BEPX7400	VBN3BEPX7300	VBN3BEPXA400	VBN3BEPXA300	VBN3BEPX8400	VBN3BEPX8300	VBN3BEPX9400	VBN3BEPX9300
		2.4	VBN3BFPX7400	VBN3BFPX7300	VBN3BFPXA400	VBN3BFPXA300	VBN3BFPX8400	VBN3BFPX8300	VBN3BFPX9400	VBN3BFPX9300
1"	50	3.8	VBN3BGPX7400	VBN3BGPX7300	VBN3BGPXA400	VBN3BGPXA300	VBN3BGPX8400	VBN3BGPX8300	VBN3BGPX9400	VBN3BGPX9300
		7	VBN3BJPX7400	VBN3BJPX7300	VBN3BJPXA400	VBN3BJPXA300	VBN3BJPX8400	VBN3BJPX8300	VBN3BJPX9400	VBN3BJPX9300
		11*	VBN3BKPX7400	VBN3BKPX7300	VBN3BKPXA400	VBN3BKPXA300	VBN3BKPX8400	VBN3BKPX8300	VBN3BKPX9400	VBN3BKPX9300
		0.4	VBN3CCPX7400	VBN3CCPX7300	VBN3CCPXA400	VBN3CCPXA300	VBN3CCPX8400	VBN3CCPX8300	VBN3CCPX9400	VBN3CCPX9300
		0.65	VBN3CDPX7400	VBN3CDPX7300	VBN3CDPXA400	VBN3CDPXA300	VBN3CDPX8400	VBN3CDPX8300	VBN3CDPX9400	VBN3CDPX9300
		1.3	VBN3CEPX7400	VBN3CEPX7300	VBN3CEPXA400	VBN3CEPXA300	VBN3CEPX8400	VBN3CEPX8300	VBN3CEPX9400	VBN3CEPX9300
		2.3	VBN3CFPX7400	VBN3CFPX7300	VBN3CFPXA400	VBN3CFPXA300	VBN3CFPX8400	VBN3CFPX8300	VBN3CFPX9400	VBN3CFPX9300
		3.5	VBN3CGPX7400	VBN3CGPX7300	VBN3CGPXA400	VBN3CGPXA300	VBN3CGPX8400	VBN3CGPX8300	VBN3CGPX9400	VBN3CGPX9300
		4.5	VBN3CHPX7400	VBN3CHPX7300	VBN3CHPXA400	VBN3CHPXA300	VBN3CHPX8400	VBN3CHPX8300	VBN3CHPX9400	VBN3CHPX9300
		8.6	VBN3CJPX7400	VBN3CJPX7300	VBN3CJPXA400	VBN3CJPXA300	VBN3CJPX8400	VBN3CJPX8300	VBN3CJPX9400	VBN3CJPX9300
1-1/4"	40	14.9	VBN3CKPX7400	VBN3CKPX7300	VBN3CKPXA400	VBN3CKPXA300	VBN3CKPX8400	VBN3CKPX8300	VBN3CKPX9400	VBN3CKPX9300
		22*	VBN3CLPX7400	VBN3CLPX7300	VBN3CLPXA400	VBN3CLPXA300	VBN3CLPX8400	VBN3CLPX8300	VBN3CLPX9400	VBN3CLPX9300
		31*	VBN3CMPX7400	VBN3CMPX7300	VBN3CMPXA400	VBN3CMPXA300	VBN3CMPX8400	VBN3CMPX8300	VBN3CMPX9400	VBN3CMPX9300
		4.1	VBN3DHPX7400	VBN3DHPX7300	VBN3DHPXA400	VBN3DHPXA300	VBN3DHPX8400	VBN3DHPX8300	VBN3DHPX9400	VBN3DHPX9300
		8.7	VBN3DJPX7400	VBN3DJPX7300	VBN3DJPXA400	VBN3DJPXA300	VBN3DJPX8400	VBN3DJPX8300	VBN3DJPX9400	VBN3DJPX9300
		12.7	VBN3DKPX7400	VBN3DKPX7300	VBN3DKPXA400	VBN3DKPXA300	VBN3DKPX8400	VBN3DKPX8300	VBN3DKPX9400	VBN3DKPX9300
		19.4*	VBN3DLPX7400	VBN3DLPX7300	VBN3DLPXA400	VBN3DLPXA300	VBN3DLPX8400	VBN3DLPX8300	VBN3DLPX9400	VBN3DLPX9300
		27	VBN3DMPX7400	VBN3DMPX7300	VBN3DMPXA400	VBN3DMPXA300	VBN3DMPX8400	VBN3DMPX8300	VBN3DMPX9400	VBN3DMPX9300
1-1/2"	40	34*	VBN3DNPX7400	VBN3DNPX7300	VBN3DNPXA400	VBN3DNPXA300	VBN3DNPX8400	VBN3DNPX8300	VBN3DNPX9400	VBN3DNPX9300
		4	VBN3EHPX7400	VBN3EHPX7300	VBN3EHPXA400	VBN3EHPXA300	VBN3EHPX8400	VBN3EHPX8300	VBN3EHPX9400	VBN3EHPX9300
		8.3	VBN3EJPX7400	VBN3EJPX7300	VBN3EJPXA400	VBN3EJPXA300	VBN3EJPX8400	VBN3EJPX8300	VBN3EJPX9400	VBN3EJPX9300
		13.4	VBN3EKPX7400	VBN3EKPX7300	VBN3EKPXA400	VBN3EKPXA300	VBN3EKPX8400	VBN3EKPX8300	VBN3EKPX9400	VBN3EKPX9300
		24	VBN3ELPX7400	VBN3ELPX7300	VBN3ELPXA400	VBN3ELPXA300	VBN3ELPX8400	VBN3ELPX8300	VBN3ELPX9400	VBN3ELPX9300
2"	40	32*	VBN3EMPX7400	VBN3EMPX7300	VBN3EMPXA400	VBN3EMPXA300	VBN3EMPX8400	VBN3EMPX8300	VBN3EMPX9400	VBN3EMPX9300
		61*	VBN3EPPX7400	VBN3EPPX7300	VBN3EPPXA400	VBN3EPPXA300	VBN3EPPX8400	VBN3EPPX8300	VBN3EPPX9400	VBN3EPPX9300
		24	VBN3FLPX7400	VBN3FLPX7300	VBN3FLPXA400	VBN3FLPXA300	VBN3FLPX8400	VBN3FLPX8300	VBN3FLPX9400	VBN3FLPX9300
		38	VBN3FNPX7400	VBN3FNPX7300	VBN3FNPA400	VBN3FNPA300	VBN3FNPX8400	VBN3FNPX8300	VBN3FNPX9400	VBN3FNPX9300
		57*	VBN3FPPX7400	VBN3FPPX7300	VBN3FPPXA400	VBN3FPPXA300	VBN3FPPX8400	VBN3FPPX8300	VBN3FPPX9400	VBN3FPPX9300
2-1/2"	40	83	VBN3FRPX7400	VBN3FRPX7300	VBN3FRPXA400	VBN3FRPXA300	VBN3FRPX8400	VBN3FRPX8300	VBN3FRPX9400	VBN3FRPX9300
		109*	VBN3FTPX7400	VBN3FTPX7300	VBN3FTPXA400	VBN3FTPXA300	VBN3FTPX8400	VBN3FTPX8300	VBN3FTPX9400	VBN3FTPX9300
		38	VBN3GNPX7400	VBN3GNPX7300	VBN3GNPXA400	VBN3GNPXA300	VBN3GNPX8400	VBN3GNPX8300	VBN3GNPX9400	VBN3GNPX9300
		74	VBN3GRPX7400	VBN3GRPX7300	VBN3GRPXA400	VBN3GRPXA300	VBN3GRPX8400	VBN3GRPX8300	VBN3GRPX9400	VBN3GRPX9300
		100*	VBN3GSPX7400	VBN3GSPX7300	VBN3GSPXA400	VBN3GSPXA300	VBN3GSPX8400	VBN3GSPX8300	VBN3GSPX9400	VBN3GSPX9300

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 3-Way NPT Control Ball Valves 1/2"-2 1/2", NEMA 3R

Actuator Features			Non Fail Safe				Fail Safe				
Actuator O.S. Number			MN6105A1011	MN6105A1201	MN7505A2001	MN7505A2209	MS7505A2030		MS7505A2130		
Power Supply	Voltage	24 VAC/DC	24 VAC/DC	24 VAC/DC	24 VAC/DC	24 VAC/DC		24 VAC/DC			
	Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz		50 / 60 Hz			
Actuator Torque	Power	5 VA	5 VA	5 VA	5 VA	6 VA		6 VA			
	(lb.-in.)	44	44	44	44	44		44			
Control	(O)2-10 Vdc			•	•	•		•			
	4-20 mA (external 500 Ohm Resistor)			•	•	•		•			
	Floating	•	•	•	•	•		•			
	Two-Position SPDT	•	•	•	•	•		•			
Two-Position SPST				•	•	•		•			
Actuator Stroke (degrees)		95° ± 3°	95° ± 3°	95° ± 3°	95° ± 3°	95° ± 3°		95° ± 3°			
Timing (drive/spring return, seconds)		90	90	90	90	90 / 25		90 / 25			
Aux Switch		2 x SPDT Add-on	2	0	2	0		1			
Feedback		2-10 Vdc Built In		•	•	•		•			
Fail Safe Action			Stay in Place	Stay in Place	Stay in Place	Stay in Place	B-AB Open (FSB)	A-AB Open (FSA)	B-AB Open (FSB)	A-AB Open (FSA)	
Normal Position (no signal)			Stay in Place	Stay in Place	A-AB Open	A-AB Open	B-AB Open	A-AB Open	B-AB Open	A-AB Open	
Valve Features		Trim	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass	Nickel-Plated Brass		Nickel-Plated Brass		
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
3-Way	1/2"	50	0.33	VBN3ABPX4002	VBN3ABPXC002	VBN3ABPX5002	VBN3ABPXD002	VBN3ABPX6402	VBN3ABPX6302	VBN3ABPXB402	VBN3ABPXB302
			0.59	VBN3ACPX4002	VBN3ACPXC002	VBN3ACPX5002	VBN3ACPXD002	VBN3ACPX6402	VBN3ACPX6302	VBN3ACPXB402	VBN3ACPXB302
			1	VBN3AEPX4002	VBN3AEPXC002	VBN3AEPX5002	VBN3AEPXD002	VBN3AEPX6402	VBN3AEPX6302	VBN3AEPXB402	VBN3AEPXB302
			2.4	VBN3AFPX4002	VBN3AFPXC002	VBN3AFPX5002	VBN3AFPXD002	VBN3AFPX6402	VBN3AFPX6302	VBN3AFPXB402	VBN3AFPXB302
			4.3	VBN3AHPX4002	VBN3AHPXC002	VBN3AHPX5002	VBN3AHPXD002	VBN3AHPX6402	VBN3AHPX6302	VBN3AHPXB402	VBN3AHPXB302
	8*	VBN3AJPX4002	VBN3AJPXC002	VBN3AJPX5002	VBN3AJPXD002	VBN3AJPX6402	VBN3AJPX6302	VBN3AJPXB402	VBN3AJPXB302		
	3/4"	50	0.4	VBN3BCPX4002	VBN3BCPXC002	VBN3BCPX5002	VBN3BCPXD002	VBN3BCPX6402	VBN3BCPX6302	VBN3BCPXB402	VBN3BCPXB302
			0.66	VBN3BDPX4002	VBN3BDPXC002	VBN3BDPX5002	VBN3BDPXD002	VBN3BDPX6402	VBN3BDPX6302	VBN3BDPXB402	VBN3BDPXB302
			1.3	VBN3BEPX4002	VBN3BEPXC002	VBN3BEPX5002	VBN3BEPXD002	VBN3BEPX6402	VBN3BEPX6302	VBN3BEPXB402	VBN3BEPXB302
			2.4	VBN3BFPX4002	VBN3BFPXC002	VBN3BFPX5002	VBN3BFPXD002	VBN3BFPX6402	VBN3BFPX6302	VBN3BFPXB402	VBN3BFPXB302
			3.8	VBN3BGPX4002	VBN3BGPXC002	VBN3BGPX5002	VBN3BGPXD002	VBN3BGPX6402	VBN3BGPX6302	VBN3BGPXB402	VBN3BGPXB302
			7	VBN3BJPX4002	VBN3BJPXC002	VBN3BJPX5002	VBN3BJPXD002	VBN3BJPX6402	VBN3BJPX6302	VBN3BJPXB402	VBN3BJPXB302
			11*	VBN3BKPX4002	VBN3BKPXC002	VBN3BKPX5002	VBN3BKPXD002	VBN3BKPX6402	VBN3BKPX6302	VBN3BKPXB402	VBN3BKPXB302
	1"	50	0.4	VBN3CCPX4002	VBN3CCPXC002	VBN3CCPX5002	VBN3CCPXD002	VBN3CCPX6402	VBN3CCPX6302	VBN3CCPXB402	VBN3CCPXB302
			0.65	VBN3CDPX4002	VBN3CDPXC002	VBN3CDPX5002	VBN3CDPXD002	VBN3CDPX6402	VBN3CDPX6302	VBN3CDPXB402	VBN3CDPXB302
			1.3	VBN3CEPX4002	VBN3CEPXC002	VBN3CEPX5002	VBN3CEPXD002	VBN3CEPX6402	VBN3CEPX6302	VBN3CEPXB402	VBN3CEPXB302
			2.3	VBN3CFPX4002	VBN3CFPXC002	VBN3CFPX5002	VBN3CFPXD002	VBN3CFPX6402	VBN3CFPX6302	VBN3CFPXB402	VBN3CFPXB302
			3.5	VBN3CGPX4002	VBN3CGPXC002	VBN3CGPX5002	VBN3CGPXD002	VBN3CGPX6402	VBN3CGPX6302	VBN3CGPXB402	VBN3CGPXB302
			4.5	VBN3CHPX4002	VBN3CHPXC002	VBN3CHPX5002	VBN3CHPXD002	VBN3CHPX6402	VBN3CHPX6302	VBN3CHPXB402	VBN3CHPXB302
			8.6	VBN3CJPX4002	VBN3CJPXC002	VBN3CJPX5002	VBN3CJPXD002	VBN3CJPX6402	VBN3CJPX6302	VBN3CJPXB402	VBN3CJPXB302
14.9			VBN3CKPX4002	VBN3CKPXC002	VBN3CKPX5002	VBN3CKPXD002	VBN3CKPX6402	VBN3CKPX6302	VBN3CKPXB402	VBN3CKPXB302	
22*			VBN3CLPX4002	VBN3CLPXC002	VBN3CLPX5002	VBN3CLPXD002	VBN3CLPX6402	VBN3CLPX6302	VBN3CLPXB402	VBN3CLPXB302	
31*			VBN3CMPX4002	VBN3CMPXC002	VBN3CMPX5002	VBN3CMPXD002	VBN3CMPX6402	VBN3CMPX6302	VBN3CMPXB402	VBN3CMPXB302	
1-1/4"	40	4.1	VBN3DHPX4002	VBN3DHPXC002	VBN3DHPX5002	VBN3DHPXD002	VBN3DHPX6402	VBN3DHPX6302	VBN3DHPXB402	VBN3DHPXB302	
		8.7	VBN3DJPX4002	VBN3DJPXC002	VBN3DJPX5002	VBN3DJPXD002	VBN3DJPX6402	VBN3DJPX6302	VBN3DJPXB402	VBN3DJPXB302	
		12.7	VBN3DKPX4002	VBN3DKPXC002	VBN3DKPX5002	VBN3DKPXD002	VBN3DKPX6402	VBN3DKPX6302	VBN3DKPXB402	VBN3DKPXB302	
		19.4*	VBN3DLPX4002	VBN3DLPXC002	VBN3DLPX5002	VBN3DLPXD002	VBN3DLPX6402	VBN3DLPX6302	VBN3DLPXB402	VBN3DLPXB302	
		27	VBN3DMPX4002	VBN3DMPXC002	VBN3DMPX5002	VBN3DMPXD002	VBN3DMPX6402	VBN3DMPX6302	VBN3DMPXB402	VBN3DMPXB302	
		34*	VBN3DNPX4002	VBN3DNPXC002	VBN3DNPX5002	VBN3DNPXD002	VBN3DNPX6402	VBN3DNPX6302	VBN3DNPXB402	VBN3DNPXB302	
1-1/2"	40	4	VBN3EHPX4002	VBN3EHPXC002	VBN3EHPX5002	VBN3EHPXD002	VBN3EHPX6402	VBN3EHPX6302	VBN3EHPXB402	VBN3EHPXB302	
		8.3	VBN3EJPX4002	VBN3EJPXC002	VBN3EJPX5002	VBN3EJPXD002	VBN3EJPX6402	VBN3EJPX6302	VBN3EJPXB402	VBN3EJPXB302	
		13.4	VBN3EKPX4002	VBN3EKPXC002	VBN3EKPX5002	VBN3EKPXD002	VBN3EKPX6402	VBN3EKPX6302	VBN3EKPXB402	VBN3EKPXB302	
		24	VBN3ELPX4002	VBN3ELPXC002	VBN3ELPX5002	VBN3ELPXD002	VBN3ELPX6402	VBN3ELPX6302	VBN3ELPXB402	VBN3ELPXB302	
		32*	VBN3EMPX4002	VBN3EMPXC002	VBN3EMPX5002	VBN3EMPXD002	VBN3EMPX6402	VBN3EMPX6302	VBN3EMPXB402	VBN3EMPXB302	
2"	40	61*	VBN3EPPX4002	VBN3EPPXC002	VBN3EPPX5002	VBN3EPPXD002	VBN3EPPX6402	VBN3EPPX6302	VBN3EPPXB402	VBN3EPPXB302	
		24	VBN3FLPX4002	VBN3FLPXC002	VBN3FLPX5002	VBN3FLPXD002	VBN3FLPX6402	VBN3FLPX6302	VBN3FLPXB402	VBN3FLPXB302	
		38	VBN3FNPX4002	VBN3FNPC002	VBN3FNPX5002	VBN3FNPD002	VBN3FNPX6402	VBN3FNPX6302	VBN3FNPCB402	VBN3FNPCB302	
		57*	VBN3FRPX4002	VBN3FRPXC002	VBN3FRPX5002	VBN3FRPXD002	VBN3FRPX6402	VBN3FRPX6302	VBN3FRPXB402	VBN3FRPXB302	
2-1/2"	40	83	VBN3FRPX4002	VBN3FRPXC002	VBN3FRPX5002	VBN3FRPXD002	VBN3FRPX6402	VBN3FRPX6302	VBN3FRPXB402	VBN3FRPXB302	
		109*	VBN3FTPX4002	VBN3FTPXC002	VBN3FTPX5002	VBN3FTPXD002	VBN3FTPX6402	VBN3FTPX6302	VBN3FTPXB402	VBN3FTPXB302	
		38	VBN3GNPX4002	VBN3GNPXC002	VBN3GNPX5002	VBN3GNPXD002	VBN3GNPX6402	VBN3GNPX6302	VBN3GNPCB402	VBN3GNPCB302	
2-1/2"	40	74	VBN3GRPX4002	VBN3GRPXC002	VBN3GRPX5002	VBN3GRPXD002	VBN3GRPX6402	VBN3GRPX6302	VBN3GRPCB402	VBN3GRPCB302	
		100*	VBN3GSPX4002	VBN3GSPXC002	VBN3GSPX5002	VBN3GSPXD002	VBN3GSPX6402	VBN3GSPX6302	VBN3GSPXB402	VBN3GSPXB302	

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 3-Way NPT Control Ball Valves 1/2"-2 1/2", NEMA 3R


Actuator Features			Fail Safe								
Actuator O.S. Number			MS8105A1030		MS8105A1130		MS4105A1030		MS4105A1130		
Power Supply	Voltage	24 VAC/DC		24 VAC/DC		100-250 VAC		100-250 VAC			
	Frequency	50 / 60 Hz		50 / 60 Hz		50 / 60 Hz		50 / 60 Hz			
Actuator Torque (lb.-in.)	Power	6 VA		6 VA		6 VA		6 VA			
	Control (0)2-10 Vdc	44		44		44		44			
Control	4-20 mA (external 500 Ohm Resistor)										
	Floating										
	Two-Position SPDT										
	Two-Position SPST	•		•		•		•			
Actuator Stroke (degrees)	95° ± 3°		95° ± 3°		95° ± 3°		95° ± 3°				
Timing (drive/spring return, seconds)	45 / 25		45 / 25		45 / 25		45 / 25				
Aux Switch	2 x SPDT Add-on	0		1		0		1			
Feedback	2-10 Vdc Built In										
Fail Safe Action	B-AB Open (FSB)    A-AB Open (FSA)		B-AB Open (FSB)    A-AB Open (FSA)		B-AB Open (FSB)    A-AB Open (FSA)		B-AB Open (FSB)    A-AB Open (FSA)				
Normal Position (no signal)	B-AB Open    A-AB Open		B-AB Open    A-AB Open		B-AB Open    A-AB Open		B-AB Open    A-AB Open				
Valve Features	Trim	Nickel-Plated Brass		Nickel-Plated Brass		Nickel-Plated Brass		Nickel-Plated Brass			
Valve Size (inches)	Close-off Pressure (psid)	Cv	Short Order Codes								
3-Way	1/2"	50	0.33	VBN3ABPX7402	VBN3ABPX7302	VBN3ABPXA402	VBN3ABPXA302	VBN3ABPX8402	VBN3ABPX8302	VBN3ABPX9402	VBN3ABPX9302
			0.59	VBN3ACPX7402	VBN3ACPX7302	VBN3ACPXA402	VBN3ACPXA302	VBN3ACPX8402	VBN3ACPX8302	VBN3ACPX9402	VBN3ACPX9302
			1	VBN3AEPX7402	VBN3AEPX7302	VBN3AEPXA402	VBN3AEPXA302	VBN3AEPX8402	VBN3AEPX8302	VBN3AEPX9402	VBN3AEPX9302
			2.4	VBN3AFPX7402	VBN3AFPX7302	VBN3AFPXA402	VBN3AFPXA302	VBN3AFPX8402	VBN3AFPX8302	VBN3AFPX9402	VBN3AFPX9302
			4.3	VBN3AHPX7402	VBN3AHPX7302	VBN3AHPXA402	VBN3AHPXA302	VBN3AHPX8402	VBN3AHPX8302	VBN3AHPX9402	VBN3AHPX9302
	3/4"	50	8*	VBN3AJPX7402	VBN3AJPX7302	VBN3AJPXA402	VBN3AJPXA302	VBN3AJPX8402	VBN3AJPX8302	VBN3AJPX9402	VBN3AJPX9302
			0.4	VBN3BCPX7402	VBN3BCPX7302	VBN3BCPXA402	VBN3BCPXA302	VBN3BCPX8402	VBN3BCPX8302	VBN3BCPX9402	VBN3BCPX9302
			0.66	VBN3BDPX7402	VBN3BDPX7302	VBN3BDPXA402	VBN3BDPXA302	VBN3BDPX8402	VBN3BDPX8302	VBN3BDPX9402	VBN3BDPX9302
			1.3	VBN3BEPX7402	VBN3BEPX7302	VBN3BEPXA402	VBN3BEPXA302	VBN3BEPX8402	VBN3BEPX8302	VBN3BEPX9402	VBN3BEPX9302
			2.4	VBN3BFPX7402	VBN3BFPX7302	VBN3BFPXA402	VBN3BFPXA302	VBN3BFPX8402	VBN3BFPX8302	VBN3BFPX9402	VBN3BFPX9302
			3.8	VBN3BGPX7402	VBN3BGPX7302	VBN3BGPXA402	VBN3BGPXA302	VBN3BGPX8402	VBN3BGPX8302	VBN3BGPX9402	VBN3BGPX9302
			7	VBN3BJPX7402	VBN3BJPX7302	VBN3BJPXA402	VBN3BJPXA302	VBN3BJPX8402	VBN3BJPX8302	VBN3BJPX9402	VBN3BJPX9302
	1"	50	11*	VBN3BKPX7402	VBN3BKPX7302	VBN3BKPXA402	VBN3BKPXA302	VBN3BKPX8402	VBN3BKPX8302	VBN3BKPX9402	VBN3BKPX9302
			0.4	VBN3CCPX7402	VBN3CCPX7302	VBN3CCPXA402	VBN3CCPXA302	VBN3CCPX8402	VBN3CCPX8302	VBN3CCPX9402	VBN3CCPX9302
			0.65	VBN3CDPX7402	VBN3CDPX7302	VBN3CDPXA402	VBN3CDPXA302	VBN3CDPX8402	VBN3CDPX8302	VBN3CDPX9402	VBN3CDPX9302
			1.3	VBN3CEPX7402	VBN3CEPX7302	VBN3CEPXA402	VBN3CEPXA302	VBN3CEPX8402	VBN3CEPX8302	VBN3CEPX9402	VBN3CEPX9302
			2.3	VBN3CFPX7402	VBN3CFPX7302	VBN3CFPXA402	VBN3CFPXA302	VBN3CFPX8402	VBN3CFPX8302	VBN3CFPX9402	VBN3CFPX9302
			3.5	VBN3CGPX7402	VBN3CGPX7302	VBN3CGPXA402	VBN3CGPXA302	VBN3CGPX8402	VBN3CGPX8302	VBN3CGPX9402	VBN3CGPX9302
			4.5	VBN3CHPX7402	VBN3CHPX7302	VBN3CHPXA402	VBN3CHPXA302	VBN3CHPX8402	VBN3CHPX8302	VBN3CHPX9402	VBN3CHPX9302
			8.6	VBN3CJPX7402	VBN3CJPX7302	VBN3CJPXA402	VBN3CJPXA302	VBN3CJPX8402	VBN3CJPX8302	VBN3CJPX9402	VBN3CJPX9302
14.9			VBN3CKPX7402	VBN3CKPX7302	VBN3CKPXA402	VBN3CKPXA302	VBN3CKPX8402	VBN3CKPX8302	VBN3CKPX9402	VBN3CKPX9302	
22*			VBN3CLPX7402	VBN3CLPX7302	VBN3CLPXA402	VBN3CLPXA302	VBN3CLPX8402	VBN3CLPX8302	VBN3CLPX9402	VBN3CLPX9302	
1-1/4"	40	31*	VBN3CMPX7402	VBN3CMPX7302	VBN3CMPXA402	VBN3CMPXA302	VBN3CMPX8402	VBN3CMPX8302	VBN3CMPX9402	VBN3CMPX9302	
		4.1	VBN3DHPX7402	VBN3DHPX7302	VBN3DHPXA402	VBN3DHPXA302	VBN3DHPX8402	VBN3DHPX8302	VBN3DHPX9402	VBN3DHPX9302	
		8.7	VBN3DJPX7402	VBN3DJPX7302	VBN3DJPXA402	VBN3DJPXA302	VBN3DJPX8402	VBN3DJPX8302	VBN3DJPX9402	VBN3DJPX9302	
		12.7	VBN3DKPX7402	VBN3DKPX7302	VBN3DKPXA402	VBN3DKPXA302	VBN3DKPX8402	VBN3DKPX8302	VBN3DKPX9402	VBN3DKPX9302	
		19.4*	VBN3DLPX7402	VBN3DLPX7302	VBN3DLPXA402	VBN3DLPXA302	VBN3DLPX8402	VBN3DLPX8302	VBN3DLPX9402	VBN3DLPX9302	
		27	VBN3DMPX7402	VBN3DMPX7302	VBN3DMPXA402	VBN3DMPXA302	VBN3DMPX8402	VBN3DMPX8302	VBN3DMPX9402	VBN3DMPX9302	
		34*	VBN3DNPX7402	VBN3DNPX7302	VBN3DNPXA402	VBN3DNPXA302	VBN3DNPX8402	VBN3DNPX8302	VBN3DNPX9402	VBN3DNPX9302	
1-1/2"	40	4	VBN3EHPX7402	VBN3EHPX7302	VBN3EHPXA402	VBN3EHPXA302	VBN3EHPX8402	VBN3EHPX8302	VBN3EHPX9402	VBN3EHPX9302	
		8.3	VBN3EJPX7402	VBN3EJPX7302	VBN3EJPXA402	VBN3EJPXA302	VBN3EJPX8402	VBN3EJPX8302	VBN3EJPX9402	VBN3EJPX9302	
		13.4	VBN3EKPX7402	VBN3EKPX7302	VBN3EKPXA402	VBN3EKPXA302	VBN3EKPX8402	VBN3EKPX8302	VBN3EKPX9402	VBN3EKPX9302	
		24	VBN3ELPX7402	VBN3ELPX7302	VBN3ELPXA402	VBN3ELPXA302	VBN3ELPX8402	VBN3ELPX8302	VBN3ELPX9402	VBN3ELPX9302	
		32*	VBN3EMPX7402	VBN3EMPX7302	VBN3EMPXA402	VBN3EMPXA302	VBN3EMPX8402	VBN3EMPX8302	VBN3EMPX9402	VBN3EMPX9302	
2"	40	61*	VBN3EPPX7402	VBN3EPPX7302	VBN3EPPXA402	VBN3EPPXA302	VBN3EPPX8402	VBN3EPPX8302	VBN3EPPX9402	VBN3EPPX9302	
		24	VBN3FLPX7402	VBN3FLPX7302	VBN3FLPXA402	VBN3FLPXA302	VBN3FLPX8402	VBN3FLPX8302	VBN3FLPX9402	VBN3FLPX9302	
		38	VBN3FNPX7402	VBN3FNPX7302	VBN3FNPA402	VBN3FNPA302	VBN3FNPX8402	VBN3FNPX8302	VBN3FNPX9402	VBN3FNPX9302	
		57*	VBN3FPPX7402	VBN3FPPX7302	VBN3FPPXA402	VBN3FPPXA302	VBN3FPPX8402	VBN3FPPX8302	VBN3FPPX9402	VBN3FPPX9302	
2-1/2"	40	83	VBN3FRPX7402	VBN3FRPX7302	VBN3FRPXA402	VBN3FRPXA302	VBN3FRPX8402	VBN3FRPX8302	VBN3FRPX9402	VBN3FRPX9302	
		109*	VBN3FTPX7402	VBN3FTPX7302	VBN3FTPXA402	VBN3FTPXA302	VBN3FTPX8402	VBN3FTPX8302	VBN3FTPX9402	VBN3FTPX9302	
		38	VBN3GNPX7402	VBN3GNPX7302	VBN3GNPXA402	VBN3GNPXA302	VBN3GNPX8402	VBN3GNPX8302	VBN3GNPX9402	VBN3GNPX9302	
			74	VBN3GRPX7402	VBN3GRPX7302	VBN3GRPXA402	VBN3GRPXA302	VBN3GRPX8402	VBN3GRPX8302	VBN3GRPX9402	VBN3GRPX9302
			100*	VBN3GSPX7402	VBN3GSPX7302	VBN3GSPXA402	VBN3GSPXA302	VBN3GSPX8402	VBN3GSPX8302	VBN3GSPX9402	VBN3GSPX9302

\* Full port ball. No flow characterizing insert.

# PRODUCT SELECTION - VALVES

## 2-Way Flanged Control Ball Valves 4"-6", NEMA 2+3R

**5-YEAR  
LIMITED  
WARRANTY**

Actuator Features		Non Fail Safe		Fail Safe		Valve Only
Actuator O.S. Number		MN6110A1003 4 to 5 in.	MN7510A2001 4 to 5 in.	MS8110A1008 4 to 5 in.	MS7510A2008 4 to 5 in.	N/A
		MN6134A1003 6 in.	MN7234A2008 6 in.	MS8120A1007 6 in.	MS7520A2007 6 in.	
Power Supply	Voltage	24 Vac	24 Vac	24 Vac	24 Vac	
	Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	
	Power	5 / 9 VA	5 / 9 VA	30 / 40 VA	14 / 16 VA	
Actuator Torque	(lb.-in.)	88/300	88/300	88/175	88/175	
Control	(O)2-10 Vdc		•		•	
	4-20 mA (external 500 Ohm Resistor)		•		•	
	Floating	•	••		•	
	Two-Position SPDT	•	••		•	
	Two-Position SPST	•	••	•	•	
Fail Safe Action	(field configurable)	Stay in Place	Stay in Place	Closed	Closed	
Normal Position (no signal)	(field configurable)	Stay in Place	Closed	Closed	Closed	
Actuator Stroke	(degrees)	95°	95°	95°	95°	
Timing	(drive/spring return, seconds)	95	95	45/20	90/20	
Aux Switch	2 x SPDT Add-on	SW2-US	SW2-US	SW2-US	SW2-US	
Feedback	2-10 Vdc Built In		•		•	
Valve Features	Trim	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel

Valve Size (inches)	Close-off Pressure (psid)	Cv*	Valve O.S. Number				
<b>NEMA 2 Actuator</b>							
4"	70	91	VBF2JS1SOA	VBF2JS1SOB	VBF2JS1SOC	VBF2JS1SOD	VBF2JS1SOX
		118	VBF2JT1SOA	VBF2JT1SOB	VBF2JT1SOC	VBF2JT1SOD	VBF2JT1SOX
		152	VBF2JU1SOA	VBF2JU1SOB	VBF2JU1SOC	VBF2JU1SOD	VBF2JU1SOX
		197	VBF2J11SOA	VBF2J11SOB	VBF2J11SOC	VBF2J11SOD	VBF2J11SOX
		254	VBF2J21SOA	VBF2J21SOB	VBF2J21SOC	VBF2J21SOD	VBF2J21SOX
5"	70	144	VBF2KU1SOA	VBF2KU1SOB	VBF2KU1SOC	VBF2KU1SOD	VBF2KU1SOX
		185	VBF2K11SOA	VBF2K11SOB	VBF2K11SOC	VBF2K11SOD	VBF2K11SOX
		240	VBF2K21SOA	VBF2K21SOB	VBF2K21SOC	VBF2K21SOD	VBF2K21SOX
		309	VBF2K31SOA	VBF2K31SOB	VBF2K31SOC	VBF2K31SOD	VBF2K31SOX
6"	70	400	VBF2K41SOA	VBF2K41SOB	VBF2K41SOC	–	VBF2K41SOX
		208	VBF2L11SOA	VBF2L11SOB	VBF2L11SOC	VBF2L11SOD	VBF2L11SOX
		268	VBF2L21SOA	VBF2L21SOB	VBF2L21SOC	VBF2L21SOD	VBF2L21SOX
6"	70	346	VBF2L41SOA	VBF2L41SOB	VBF2L41SOC	–	VBF2L41SOX
		441	VBF2L51SOA	VBF2L51SOB	VBF2L51SOC	–	VBF2L51SOX
		577	VBF2L61SOA	VBF2L61SOB	VBF2L61SOC	–	VBF2L61SOX
		650	VBF2L71SOA	VBF2L71SOB	VBF2L71SOC	–	VBF2L71SOX
<b>NEMA 3R Actuator</b>							
4"	70	91	VBF2JC1SRA	VBF2JC1SRB	VBF2JC1SRC	VBF2JC1SRD	–
		118	VBF2JT1SRA	VBF2JT1SRB	VBF2JT1SRC	VBF2JT1SRD	–
		152	VBF2JU1SRA	VBF2JU1SRB	VBF2JU1SRC	VBF2JU1SRD	–
		197	VBF2J11SRA	VBF2J11SRB	VBF2J11SRC	VBF2J11SRD	–
		254	VBF2J21SRA	VBF2J21SRB	VBF2J21SRC	VBF2J21SRD	–
5"	70	144	VBF2KU1SRA	VBF2KU1SRB	VBF2KU1SRC	VBF2KU1SRD	–
		185	VBF2K11SRA	VBF2K11SRB	VBF2K11SRC	VBF2K11SRD	–
		240	VBF2K21SRA	VBF2K21SRB	VBF2K21SRC	VBF2K21SRD	–
		309	VBF2K31SRA	VBF2K31SRB	VBF2K31SRC	VBF2K31SRD	–
6"	70	400	VBF2K41SRA	VBF2K41SRB	VBF2K41SRC	–	–
		208	VBF2L11SRA	VBF2L11SRB	VBF2L11SRC	VBF2L11SRD	–
		268	VBF2L21SRA	VBF2L21SRB	VBF2L21SRC	VBF2L21SRD	–
6"	70	346	VBF2L41SRA	VBF2L41SRB	VBF2L41SRC	–	–
		441	VBF2L51SRA	VBF2L51SRB	VBF2L51SRC	–	–
		577	VBF2L61SRA	VBF2L61SRB	VBF2L61SRC	–	–
		650	VBF2L71SRA	VBF2L71SRB	VBF2L71SRC	–	–




2-Way

\* Maximum flow 700 gpm  
\*\*4 and 5 inch valves only.

# PRODUCT SELECTION - VALVES

## 3-Way Flanged Control Ball Valves 4"-6", NEMA 2+3R

**5-YEAR  
LIMITED  
WARRANTY**

Actuator Features		Non Fail Safe		Fail Safe		Valve Only
Actuator O.S. Number		MN6110A1003 4 to 5 in.	MN7510A2001 4 to 5 in.	MS8110A1008 4 to 5 in.	MS7510A2008 4 to 5 in.	N/A
		MN6134A1003 6 in.	MN7234A2008 6 in.	MS8120A1007 6 in.	MS7520A2007 6 in.	
Power Supply	Voltage	24 Vac	24 Vac	24 Vac	24 Vac	
	Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	
	Power	5 / 9 VA	5 / 9 VA	30 / 40 VA	14 / 16 VA	
Actuator Torque	(lb.-in.)	88/300	88/300	88/175	88/175	
Control	(0)2-10 Vdc		•		•	
	4-20 mA (external 500 Ohm Resistor)		•		•	
	Floating	•	•**		•	
	Two-Position SPDT	•	•**		•	
	Two-Position SPST	•	•**	•	•	
Fail Safe Action	(field configurable)	Stay in Place	Stay in Place	A-AB Closed	A-AB Closed	
Normal Position (no signal)	(field configurable)	Stay in Place	A-AB Closed	A-AB Closed	A-AB Closed	
Actuator Stroke	(degrees)	95°	95°	95°	95°	
Timing	(drive/spring return, seconds)	95	95	45/20	90/20	
Aux Switch	2 x SPDT Add-on	SW2-US	SW2-US	SW2-US	SW2-US	
Feedback	2-10 Vdc Built In		•		•	
Valve Features	Trim	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel

Valve Size (inches)	Close-off Pressure (psid)	Cv*	Valve O.S. Number				
<b>NEMA 2 Actuator</b>							
4"	70	91	VBF3JS1SOA	VBF3JS1SOB	VBF3JS1SOC	VBF3JS1SOD	VBF3JS1SOX
		118	VBF3JT1SOA	VBF3JT1SOB	VBF3JT1SOC	VBF3JT1SOD	VBF3JT1SOX
		152	VBF3JU1SOA	VBF3JU1SOB	VBF3JU1SOC	VBF3JU1SOD	VBF3JU1SOX
		197	VBF3J11SOA	VBF3J11SOB	VBF3J11SOC	VBF3J11SOD	VBF3J11SOX
		254	VBF3J21SOA	VBF3J21SOB	VBF3J21SOC	VBF3J21SOD	VBF3J21SOX
		327	VBF3J31SOA	VBF3J31SOB	VBF3J31SOC	VBF3J31SOD	VBF3J31SOX
5"	70	144	VBF3KU1SOA	VBF3KU1SOB	VBF3KU1SOC	VBF3KU1SOD	VBF3KU1SOX
		185	VBF3K11SOA	VBF3K11SOB	VBF3K11SOC	VBF3K11SOD	VBF3K11SO
		240	VBF3K21SOA	VBF3K21SOB	VBF3K21SOC	VBF3K21SOD	VBF3K21SOX
		309	VBF3K31SOA	VBF3K31SOB	VBF3K31SOC	VBF3K31SOD	VBF3K31SOX
400	VBF3K41SOA	VBF3K41SOB	VBF3K41SOC	—	VBF3K41SOX		
6"	70	208	VBF3L11SOA	VBF3L11SOB	VBF3L11SOC	VBF3L11SOD	VBF3L11SOX
		268	VBF3L21SOA	VBF3L21SOB	VBF3L21SOC	VBF3L21SOD	VBF3L21SOX
		346	VBF3L41SOA	VBF3L41SOB	VBF3L41SOC	—	VBF3L41SOX
		441	VBF3L51SOA	VBF3L51SOB	VBF3L51SOC	—	VBF3L51SOX
		577	VBF3L61SOA	VBF3L61SOB	VBF3L61SOC	—	VBF3L61SOX
		650	VBF3L71SOA	VBF3L71SOB	VBF3L71SOC	—	VBF3L71SOX
<b>NEMA 3R Actuator</b>							
4"	70	91	VBF3JS1SRA	VBF3JS1SRB	VBF3JS1SRC	VBF3JS1SRD	—
		118	VBF3JT1SRA	VBF3JT1SRB	VBF3JT1SRC	VBF3JT1SRD	—
		152	VBF3JU1SRA	VBF3JU1SRB	VBF3JU1SRC	VBF3JU1SRD	—
		197	VBF3J11SRA	VBF3J11SRB	VBF3J11SRC	VBF3J11SRD	—
		254	VBF3J21SRA	VBF3J21SRB	VBF3J21SRC	VBF3J21SRD	—
		327	VBF3J31SRA	VBF3J31SRB	VBF3J31SRC	VBF3J31SRD	—
5"	70	144	VBF3KU1SRA	VBF3KU1SRB	VBF3KU1SRC	VBF3KU1SRD	—
		185	VBF3K11SRA	VBF3K11SRB	VBF3K11SRC	VBF3K11SRD	—
		240	VBF3K21SRA	VBF3K21SRB	VBF3K21SRC	VBF3K21SRD	—
		309	VBF3K31SRA	VBF3K31SRB	VBF3K31SRC	VBF3K31SRD	—
400	VBF3K41SRA	VBF3K41SRB	VBF3K41SRC	—	—		
6"	70	208	VBF3L11SRA	VBF3L11SRB	VBF3L11SRC	VBF3L11SRD	—
		268	VBF3L21SRA	VBF3L21SRB	VBF3L21SRC	VBF3L21SRD	—
		346	VBF3L41SRA	VBF3L41SRB	VBF3L41SRC	—	—
		441	VBF3L51SRA	VBF3L51SRB	VBF3L51SRC	—	—
		577	VBF3L61SRA	VBF3L61SRB	VBF3L61SRC	—	—
		650	VBF3L71SRA	VBF3L71SRB	VBF3L71SRC	—	—

\* Maximum flow 700 gpm  
\*\*4 and 5 inch valves only.



3-Way

# PRODUCT SELECTION - VALVES

## Flanged Control Ball Valves 2½"- 6"



**5-YEAR  
LIMITED  
WARRANTY**

Actuator Features		Non Fail Safe							
Actuator O.S. Number		MNT7505A2001 MNT7505A2209	MN6105A1011 MN6105A1201	MNT7510A2001 MNT7510A2209	MN6110A1003 MN6110A1201	MNT720A2007 MNT720A2205	MN6120A1002 MN6120A1200	MNT234A2008	MN6134A1003
Power Supply	Voltage	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac	24 Vac
	Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
	Power	5 VA	5 VA	5 VA	5 VA	6 VA	6 VA	9 VA	9 VA
Actuator Torque	(lb.-in.)	44	44	88	88	175	175	300	300
Control	(0)2-10 Vdc	•		•		•		•	
	4-20 mA (external 500 Ohm Resistor)	•		•		•		•	
	Floating	•	•	•	•		•		•
	Two-Position SPDT	•	•	•	•		•		•
Two-Position SPST	•	•	•	•		•		•	
Fail Safe Action		Stay in place							
Normal Position (no signal) (field configurable)		Open or Closed	Stay in Place	Open or Closed	Stay in Place	Open or Closed	Stay in Place	Open or Closed	Stay in Place
Actuator Stroke	(degrees)	95	95	95	95	95	95	95	95
Timing	(seconds)	95	95	95	95	95	95	95	95
Aux Switch	SPDT Built In	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2	0 / 2		
	2 x SPDT Add-On					SW2-US	SW2-US	SW2-US	SW2-US
Feedback	(0)2-10 Vdc Built In	•		•		•		•	

	Valve Size (inches)	Cv	Valve Type	Max Static Water Pressure	Valve Trim	Valve OS Number	Close-off Pressure, psid							
2-Way	2-1/2"	63	On/Off, Mod	360 psi @ 250°F	Stainless Steel	VBF5011A1734	100	100						
	3"	100	On/Off, Mod	360 psi @ 250°F	Stainless Steel	VBF5011A1767	100	100						
	4"	160	On/Off, Mod	240 psig @ 250°F	Stainless Steel	VBF5011A1858			70	70	70	70	70	70
	5"	250	On/Off, Mod	240 psig @ 250°F	Stainless Steel	VBF5011A1882			70	70	70	70	70	70
	6"	360	On/Off, Mod	240 psig @ 250°F	Stainless Steel	VBF5011A1916						70*	70	70
3-Way	2-1/2"	63	Mixing, Diverting	360 psi @ 250°F	Brass	VBF5013B1003	40	40						
	3"	100	Mixing, Diverting	360 psi @ 250°F	Stainless Steel	VBF5013B1011			70	70	70	70	70	70
	4"	160	Mixing, Diverting	240 psig @ 250°F	Stainless Steel	VBF5013B1029			70	70	70	70	70	70
	5"	250	Mixing, Diverting	240 psig @ 250°F	Stainless Steel	VBF5013B1037			70	70	70	70	70	70
	6"	360	Mixing, Diverting	240 psig @ 250°F	Stainless Steel	VBF5013B1045						70*	70	70

\* 2-position only

# PRODUCT SELECTION - VALVES

## Flanged Control Ball Valves 2½" - 6"



**5-YEAR  
LIMITED  
WARRANTY**

Actuator Features		Fail Safe								
Actuator O.S. Number		MS7505A2030 MS7505A2130	MS8105A1030 MS8105A1130	MS4105A1030 MS4105A1130	MS7510A2008 MS7510A2206 MS7510H2209	MS8110A1008 MS8110A1206	MS4110A1002 MS4110A1200	MS7520A2007 MS7520A2205 MS7520H2208	MS8120A1007 MS8120A1205	MS4120A1001 MS4120A1209
Power Supply	Voltage	24 Vac	24 Vac	100-250 Vac	24 Vac	24 Vac	100-250 Vac	24 Vac	24 Vac	100-250 Vac
	Frequency	50/60 Hz	50/60 Hz	60 Hz	50/60 Hz	50/60 Hz	60 Hz	50/60 Hz	50/60 Hz	60 Hz
	Power	7.5 VA	8 VA	11 VA	14 VA	30 VA	45 VA	16 VA	40 VA	60 VA
Actuator Torque	(lb.-in.)	44	44	44	88	88	88	175	175	175
Control	(0)2-10 Vdc	•			•			•		
	4-20 mA (external 500 Ohm Resistor)	•			•			•		
	Floating	•			•			•		
	Two-Position SPDT	•			•			•		
	Two-Position SPST	•	•	•	•	•	•	•	•	•
Fail Safe Action		Configurable Open/Closed								
Normal Position (no signal) (field configurable)		Open or Closed								
Actuator Stroke	(degrees)	95	95	95	95	95	95	95	95	95
Timing	(seconds)	90	45	45	90	45	45	90	45	45
Aux Switch	SPDT Built In	0 / 1	0 / 1	0 / 1	0 / 2 / 2	0 / 2	0 / 2	0 / 2 / 2	0 / 2	0 / 2
	2 x SPDT Add-On				SW2-US	SW2-US	SW2-US	SW2-US	SW2-US	SW2-US
Feedback	(0)2-10 Vdc Built In	•			•			•		

	Valve Size (inches)	Cv	Valve Type	Max Static Water Pressure	Valve Trim	Valve OS Number	Close-off Pressure, psid						
2-Way	2-1/2"	63	On/Off, Mod	360 psi @ 250°F	Stainless Steel	VBF5011A1734	100	100	100				
	3"	100	On/Off, Mod	360 psi @ 250°F	Stainless Steel	VBF5011A1767	100	100	100				
	4"	160	On/Off, Mod	240 psig @ 250°F	Stainless Steel	VBF5011A1858				70	70	70	70
	5"	250	On/Off, Mod	240 psig @ 250°F	Stainless Steel	VBF5011A1882				70	70	70	70
	6"	360	On/Off, Mod	240 psig @ 250°F	Stainless Steel	VBF5011A1916						70*	70
3-Way	2-1/2"	63	Mixing, Diverting	360 psi @ 250°F	Brass	VBF5013B1003	40	40	40				
	3"	100	Mixing, Diverting	360 psi @ 250°F	Stainless Steel	VBF5013B1011				70	70	70	70
	4"	160	Mixing, Diverting	240 psig @ 250°F	Stainless Steel	VBF5013B1029				70	70	70	70
	5"	250	Mixing, Diverting	240 psig @ 250°F	Stainless Steel	VBF5013B1037				70	70	70	70
	6"	360	Mixing, Diverting	240 psig @ 250°F	Stainless Steel	VBF5013B1045						70*	70

\* 2-position only









# Specification Take-Off Service

## The Honeywell Take-Off Service Can Create Product Schedules From:

- Product specifications
- Existing schedules
- Drawings
- Obsolete or competitive schedules

## Products Supported by the Take-Off Service

- Commercial Water and Steam Valves
- Valve Actuators (Electric or Pneumatic)
- Commercial Control Dampers
- Custom Dampers
- Damper Actuators (Electric or Pneumatic)
- Variable Frequency Drives

**Our goal is to help provide you with the best possible solution for each job.**



## Participate in the Specification Take-Off Service

1. Submit your information by email to [takeoff.service@honeywell.com](mailto:takeoff.service@honeywell.com)
2. Include your desired turn-around time.
3. Take-Off Service staff will send you a confirmation that your email was received. We always attempt to have your request finished as soon as possible. Please note, however, that the quality of the submitted information largely determines the turn-around time. We will work closely with you to ensure that we have enough information to move forward as quickly as possible.
4. A final product schedule document will be returned to you following take-off completion.

### Included in the Final Take-Off Document

We send a comprehensive spreadsheet, which contains:

- A complete product schedule
- Base price
- Directions on how to order Honeywell products
- Links to product submittals
- Quote identification number

### Questions?

If you have questions about the Honeywell Take-Off Service, please email us at: [takeoff.service@honeywell.com](mailto:takeoff.service@honeywell.com)

# Configure, Price, Quote: CPQ Select

Configure, price, and quote Honeywell Field Devices from a single, easy-to-use tool.

## Easy to Use CPQ Features

- Quickly find and select the right product for your application
- Compare specifications across different products
- View and download technical literature
- Configure and tag valve assemblies
- Create quotations and save automatically to the cloud for future projects
- Export simple quotations or include full submittal documentation

## Honeywell Commercial Products Include

- Actuators – Direct Coupled Actuators (DCA) and Foot Mounted
- Control Dampers
- Control Valves & Actuators
- Economizer Controllers
- Pneumatics
- Sensors
- Submeters
- Standalone Controllers
- Thermostats
- Variable Frequency Drives (VFDs)



## Contact Information and Websites

### Main Customer Web Site

[customer.honeywell.com](http://customer.honeywell.com)

### Commercial Components Technical Hotline

888-516-9347

[BuildingsProductSupport@Honeywell.com](mailto:BuildingsProductSupport@Honeywell.com)

### Literature Ordering

[literature.honeywell.com](http://literature.honeywell.com)

### Honeywell Promotional Materials

[honeywellpromotionalproducts.com/catalog/default.aspx](http://honeywellpromotionalproducts.com/catalog/default.aspx)

### Global Field Devices Application and Selection Guide

#63-9271 at [literature.honeywell.com](http://literature.honeywell.com)

### Specification Take-Off Service

[takeoff.service@honeywell.com](mailto:takeoff.service@honeywell.com)

### For More Information

[buildingcontrols.honeywell.com](http://buildingcontrols.honeywell.com)

### Honeywell Building Technologies

1985 Douglas Drive North  
Golden Valley, MN 55422-3992  
[www.honeywell.com](http://www.honeywell.com)

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