

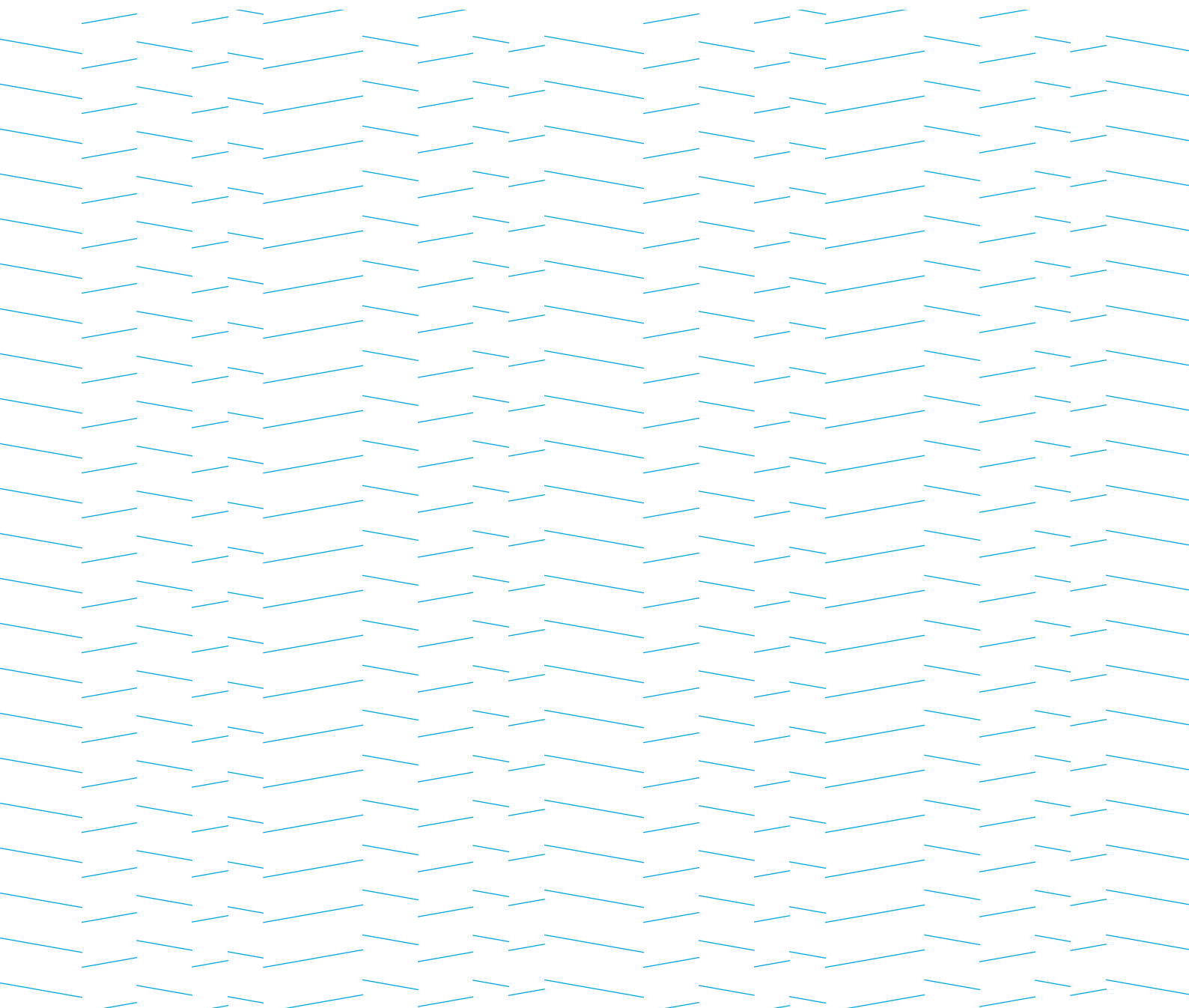
# NELES

High quality,  
safety and  
performance

Jamesbury™ valve and  
actuator solutions



“We qualify our products with intense cryogenic, fire, temperature and pressure testing. Only then are they made available for customers.”



# Table of contents

01	Ball valves	06
	Ball valves overview	6
	Flanged ball valves	7
	Threaded-end ball valves	7
	Value-Line™ ball valves	9
	Special service ball valves	11
	Ball valve accessories	15
02	High-performance butterfly valves	16
	High-performance butterfly valves overview	16
	Wafer-Sphere™ butterfly valves	20
	Special service butterfly valves	21
03	High-performance actuators	22
	High-performance actuators overview	22
	Electric, pneumatic & manual actuators	23
04	Valve monitoring	26
	Valve monitoring and communication overview	26
	Valve controllers, limit switches and sensors	27

Always select the right valve for the job. Neles offers a wide range of valve packages from the leading Neles™ and Jamesbury™ valve brands for all process conditions.

## Proven reliability leads to lower costs



We at Neles know that when it comes to valves, reliability is one of your most important purchase considerations. The longer a valve performs without problems, the better. We believe that our Jamesbury valve and actuator solutions provide the best performance available on the market today.

How can we make such a bold statement? It's our technology. Innovative sealing designs that eliminate leaks. Seat materials that withstand extraordinary extremes in temperature and pressure. Actuation that provides the highest cycle life. All proven in thousands of applications and offering benefits beyond anything offered by our competition.

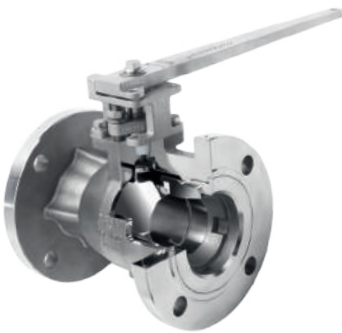
These are the characteristics for which Jamesbury products have been known, for over 60 years. Today, these characteristics and state-of-the-art networking capabilities are the foundation for a whole range of new solutions designed to answer your growing demands for lowest total cost.





# Jamesbury ball valves stand the test of time

Ask anyone which brand of ball valve continues to perform at the highest level, and the answer you will hear most often is Jamesbury ball valves. It's not hard to see why.



- A wide range of application-appropriate valves with proven, cost-saving features
- Xtreme™ sealing technology that opens up a whole new range of applications – with performance and ratings that exceed the competition
- Sophisticated automation capabilities that are proven to exceed user requirements for cycle life and cost reduction
- Network-ready capability throughout the product line to cut installation and maintenance costs
- OEM responsibility for package performance
- Fugitive emissions compliance to TA-Luft, ISO and others
- Service and technical support

## Key features:

- Flexible lip design provides reliable bi-directional shut-off and cavity relief.
- Many body, trim and seat options are available to handle a variety of applications and demanding critical services.
- Fire-Tite™ to the requirements of ANSI/API 607 and ISO 10497.
- PED and ATEX certified
- Available in 1/2" through 20" (DN 15-500) standard bore flanged ball valves and 1/2" through 24" (DN 15-600) full bore flanged ball valves, ANSI Class 150 and 300.
- A variety of body configurations from floating ball to trunnion-mounted designs.

# Flanged ball valves



## Series 7000 and Series 9000

Series 7000 standard port and Series 9000 full port polymeric-seated flanged ball valves provide high flow capacity for isolation and control applications in industries ranging from chemical and petroleum, to power, and pulp and paper. These valves offer long-lasting reliable shut-off, and are fire-tested to meet the requirements of ANSI/API607 and ISO 10497.

Product	Sizes	Pressure classes	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 7000 standard port ball valves</b>	½" – 20" (DN15 – 500)	150 300	500 °F (260 °C)	Carbon steel 316SS Alloy 20 Monel Hastelloy C	B107-1
<b>Series 9000 full port ball valves</b>	½" – 24" (DN15 – 600)	150 300	500 °F (260 °C)	Carbon steel 316SS Alloy 20 Monel Hastelloy C	B107-2

# Threaded-end ball valves



## Series 4000 ball valve

Series 4000 standard port and full port 3-piece ball valves offer outstanding performance and versatility. Three end connections are available: threaded, socket-weld, and butt-weld, in various pipe sizes and schedules. Available as CWP-rated with cold working pressures up to 2500 psi (172 bar) or as ASME Class 800 rated up to 1973 psi (136 bar).

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 4000 standard port ball valves</b>	½" – 1" (DN15 – 25)	2500 psi (172 bar)	500 °F (260 °C)	Carbon steel 316SS Monel Hastelloy C	B105-1
	1 ¼" – 2" (DN32 – 50)	2250 psi (155 bar)			
	2 ½" (DN65)	1000 psi (69 bar)			
<b>Series 4000 full port ball valves</b>	½" – ¾" (DN15 – 20)	2500 psi (172 bar)	500 °F (260 °C)	Carbon steel 316SS Monel Hastelloy C	B105-1
	1" – 1 ½" (DN25 – 40)	2250 psi (155 bar)			
	2" (DN50)	1000 psi (69 bar)			

<sup>1</sup> Consult factory for specific material availability.

Monel is a registered trademark of Special Metals Corporation. Hastelloy is a registered trademark of Haynes International, Inc.



# Threaded-end ball valves



## The Eliminator™ ball valve

The Eliminator ball valve incorporates standard ports, fire-tested performance, rugged actuator support, and flexible-lip seats to provide application versatility that goes beyond many other valves. It is either CWP-rated with cold working pressures of up to 2000 psi (138 bar) or ASME Class 600 rated up to 1480 psi (102 bar). Available prepared for oxygen and chlorine services.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Eliminator standard port ball valves</b>	¼" – 2" (DN8 – 50) CWP	2000 psi (138 bar)	500 °F (260 °C)	Carbon steel 316SS Monel Hastelloy C	B101-2
	¼" – 2" (DN8 – 50) ASME-600	1480 psi (102 bar)			



## Series 2000 ball valve

Clincher™ series 2000 ball valves are rugged high-performance ball valves designed to handle an extremely wide variety of liquids, gases, and slurries. These valves are available in brass, carbon, and stainless steel. Unique body design aids piping system dis-assembly.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 2000 standard port ball valves</b>	¼" – 2" (DN8 – 50)	800 psi (55 bar)	500 °F (260 °C)	Carbon steel 316SS Brass	B102-1



## A-Style ball valve

The threaded-end A-Style ball valve design incorporates standard ports, fire tested performance, actuator mounting pad, and flexible lip seats for extended cycle life. The A-Style is similar to the Eliminator. The A-Style model D maintains the same end to end dimension as the A-Style model C and can be used as a direct replacement.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>A-Style ball valves</b>	¼" – 2" (DN8 – 50)	2000 psi (138 bar)	500 °F (260 °C)	Carbon steel 316SS Monel Hastelloy C	B100-1

<sup>1</sup> Consult factory for specific material availability.



# Value-Line ball valves



## Series 100 ball valve

Series 100 general purpose ball valves feature bubble tight shut-off for industrial and utility services. Ideal for applications where non-relieving seats are acceptable.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 100 ball valves</b>	¼" – 2" (DN8 – 50)	2000 psi (138 bar)	450 °F (232 °C)	Carbon steel 316SS	B103-5



## Series 5H ball valve

The Value-Line™ series 5H threaded ball valve is the right choice for a wide range of high-pressure fluid and gas applications where superior performance and low cost are equally important. The series 5H incorporates our unique flexible-lip seat design to provide long-lasting tight shut-off at pressures up to 4500 psi (310 bar) in sizes ¼" – 1", and 3000 psi (206 bar) in sizes 1 ¼" – 2".

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 5H ball valves</b>	¼" – 1" (DN8 – 25)	4500 psi (310 bar)	230 °F (110 °C)	Carbon steel 316SS	B106-2
	1 ¼" – 2" (DN32 – 50)	3000 psi (206 bar)			



## Series 3 ball valve

Series 3 ball valves have a 3-piece, threaded or socket-weld body design. A range of construction materials provides years of continuous, reliable service in a wide variety of applications. Seat material options handle the vast majority of commonly encountered fluids up to full body rating, including saturated steam up to 250 psi (17 bar). Provides high flow, while minimizing pressure drop. The standard body caps of the series 3C socket-weld valves are 316 (CF3M) stainless steel when a 316SS valve is specified.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 3 ball valves</b>	½" – 2" (DN15 – 50)	1000 psi (69 bar)	500 °F (260 °C)	Carbon steel 316SS	B105-4

<sup>1</sup> Consult factory for specific material availability.

# Value-Line ball valves



## Series 6F ball valve

The series 6F ball valve offers a 2-piece, full port, threaded configuration and 1000 psi pressure rating as an ideal choice for applications where tight shut-off and low  $\Delta p$  are required. Fire-Tite to ANSI/API 607, it handles the vast majority of commonly encountered fluids up to full body rating, including saturated steam up to 275 psi (19 bar).

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 6F ball valves</b>	½" – 2" (DN15 – 50)	1000 psi (69 bar)	500 °F (260 °C)	Carbon steel 316SS	B101-3
	3" (DN80)	800 psi (55 bar)			



## Series 3000 ball valve

Series 3000 ball valves are perfect for applications where positive, long-lasting shut-off is required. Ideal for vent, bypass, sampling and gauge isolation, these valves provide cost-effective shut-off in a wide range of process industry, manufacturing, commercial and OEM services. Seating options permit the handling of many commonly encountered abrasives, steam and applications with wide temperature swings.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 3000 ball valves</b>	¼" – 2" (DN8 – 50)	2000 psi (138 bar)	2000 psi (138 bar)	Carbon steel 316SS	B104-1

<sup>1</sup> Consult factory for specific material availability.

# Special service ball valves



## FM-approved electric interlocking valve (FM figure 1051)

Factory Mutual (FM)-approved for positive shut-off and position indication for fuel light-off of oil or gas burners. The supervisory cock valves provide fast manual actuation, low torque and reliable tight sealing.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 2000 electric interlocking valves</b>	½" – 2" (DN15 – 50)	400 psi (27 bar)	250 °F (121 °C)	Carbon steel 316SS	B131-1
<b>Series 4000, Eliminator &amp; A-Style electric interlocking valves</b>	¼" – 2" (DN8 – 50)	2250 psi (155 bar)	250 °F (121 °C)	Carbon steel 316SS	B131-1
<b>Series 7000 electric interlocking valves</b>	½" – 6" (DN15 – 150)	285 psi (19 bar) Class 150	250 °F (121 °C)	Carbon steel 316SS	B131-1
		740 psi (51 bar) Class 300			



## FM-approved safety shut-off & vent valves (FM figure 1052)

FM-approved, these valves provide protection against fire and explosive hazards during light-off and operation of fuel-burning equipment. Valves will close rapidly with positive shut-off when electrical signal is interrupted or air pressure is lost.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 4000, Eliminator &amp; A-Style safety shut-off valves</b>	¼" – 2" (DN8 – 50)	1200 psi (83 bar)	300 °F (149 °C)	Carbon steel 316SS	B131-2
<b>Series 7000 safety shut-off valves</b>	½" – 8" (DN15 – 200)	285 psi (19 bar)	300 °F (149 °C)	Carbon steel 316SS	B131-2
<b>Series 9000 safety shut-off valves</b>	½" – 6" (DN15 – 150)	285 psi (19 bar)	300 °F (149 °C)	Carbon steel 316SS	B131-2

<sup>1</sup> Consult factory for specific material availability.

# Special service ball valves



## FM-approved emergency shut-off heat activated valves (FM figure 1075)

These valves provide emergency shut-off for flammable gases, liquids and toxic fluids where ambient temperatures exceed acceptable limits. FM-approved and available with fusible links for shut off temperatures ranging from 165 °F (73 °C) to 360 °F (182 °C) shut-off. Limit switches are available for remote indication of valve position.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Series 2000 safety shut-off heat activated valves</b>	½" – 1 ½" (DN 15 – 40)	800 psi (55 bar)	500 °F (260 °C)	Carbon steel 316SS	B132-1
<b>Series 7150 safety shut-off heat activated valves</b>	½" – 1" (DN15 – 25)	285 psi (19 bar) Class 150	500 °F (260 °C)	Carbon steel 316SS	B132-1
<b>Series 9000 safety shut-off heat activated valves</b>	½" – 1" (DN15 – 25)	740 psi (51 bar) Class 300	500 °F (260 °C)	Carbon steel 316SS	B132-1
<b>Eliminator series safety shut-off heat activated valves</b>	¼" – 1 ¼" (DN8 – 32)	2000 psi (138 bar)	500 °F (260 °C)	Carbon steel 316SS	B132-1



## CSA approved gas shut-off & vent valves (CSA figure 1057)

Jamesbury figure 1057 automatic safety gas valves are CSA approved for providing protection against fire and explosive hazards during light-off and operation of gas-burning equipment. When the electrical signal is interrupted or when there is a loss of air pressure, these gas-line valves operate rapidly to isolate or vent gas flow. The units consist of a valve with actuator, limit switch, and solenoid pilot valve, and are approved as an assembly.

Product	Sizes	Maximum pressure	Minimum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Eliminator &amp; series 4000 gas shut-off &amp; vent valves</b>	¼" – 2" (DN8 – 50)	200 psi (14 bar)	-40 °F (-40 °C)	Carbon steel 316SS	B131-4
<b>Series 7000 gas shut-off &amp; vent valves</b>	½" – 8" (DN15 – 200)	285 psi (19 bar) Class 150	-60 °F (-51 °C)	Carbon steel 316SS	B131-4
<b>Series 9000 safety shut-off valves</b>	½" – 6" (DN15 – 150)	200 psi (14 bar)	-60 °F (-51 °C)	Carbon steel 316SS	B131-4

<sup>1</sup> Consult factory for specific material availability.



# Special service ball valves



## EN 161 approved safety shut-off & vent valves

Jamesbury EN161 approved automatic safety shut-off valves provide industry leading performance and reliability for liquid and gas burners and appliances.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>4000 series safety shut-off &amp; vent valve</b>	½" – 2" (DN15 – 50)	16 bar	60 °C	Carbon steel 316SS	B131-5
<b>7000 series safety shut-off &amp; vent valve</b>	½" – 6" (DN15 – 150)	16 bar	60 °C	Carbon steel 316SS	B131-5
<b>9000 series safety shut-off &amp; vent valve</b>	½" – 6" (DN15 – 150)	16 bar	60 °C	Carbon steel 316SS	B131-5



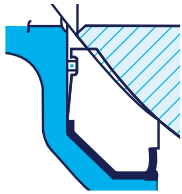
## 3-Way flanged ball valves

Jamesbury 3-way ball valves are extremely versatile units of rugged design for diverting or blending flow in a variety of gases or liquids. Bottom ported 3-way ball valves provide a variety of flow paths not commonly found in other 3-way designs. These valves are designed for class 150 service.

Product	Sizes	Maximum pressure	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>3-way flanged ball valves</b>	2" – 12" (DN50 – 300)	285 psi (19 bar)	300 °F (149 °C)	Carbon steel 316SS	B114-1
<b>Bottom ported 3-way flanged ball valves</b>	2" – 8" (DN50 – 200)	285 psi (19 bar)	300 °F (149 °C)	Carbon steel 316SS	B114-2

<sup>1</sup> Consult factory for specific material availability.

# Special service ball valves

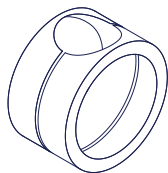


## Barrier seat ball valves

Provides superior performance in handling media involving scale and solid build-up in the valve. Such applications include green and white liquor in pulp mill recovery, oxygen lines in steel mill BOP lines and handling potash fertilizers. Flexible-lip design adjusts for changes in pressure, temperature and wear.

**Bulletin: B151-5**

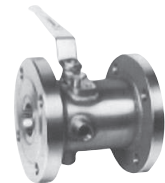
---



## Cavity fillers

Cavity fillers are available for full-bore valves. The fillers are TFE and used for sanitary applications and in processes where cross contamination is a concern. Food processing, pharma-chemicals, cosmetics, paints, solvents, finishes and dyes are typical applications where fillers are employed.

---



## Steam jacketed ball valves

Valves with steam jacket are available with either a removable 2 piece bolt-on jacket or a permanent weld-on jacket.

**Bulletin: B151-3**

---

## Steam service ball valves

Standard Jamesbury ball valves are an excellent choice for on-off plant steam service.

**Bulletin: B150-1**

## Chlorine service ball valves

For both producers and users of chlorine, the unique, flexible-lip design of these valves not only provides tight shut-off, but also flexes and vents chlorine safely to the high-pressure side of the valve when pressure builds up. Valves are constructed of special materials, cleaned and prepared for chlorine service.

**Bulletin: B150-2**

## Oxygen service ball valves

A complete line of valves is available for oxygen applications, ranging from air separation to basic oxygen steel furnace systems. To ensure these valves are compatible with oxygen, stringent material cleaning, handling, assembly and packaging procedures are carefully followed.

**Bulletin: B150-3**

## Vacuum service ball valves

Jamesbury offers both standard and specially prepared valves for vacuum systems. Proven valve designs coupled with resilient seat materials minimize out-gassing and the need for additional valves for applications below  $2 \times 10^{-2}$  torr.

**Bulletin: B150-4**

## Hydrogen peroxide ball valves

Uniquely designed and prepared to handle the fluid properties of hydrogen peroxide, and keep decomposition to a minimum.

**Bulletin: B150-5**

## Double block and bleed valves (DBB)

Valves with non-cavity relieving seats prevent pressurized media from both sides of the valve from entering the body cavity to allow sampling or bleeding. External cavity relief is required for DBB constructions.

**Bulletin: B151-1**

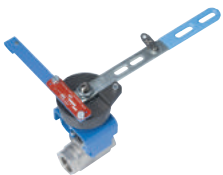
# Ball valve accessories



## Emission-Pak™ assembly

Designed to provide double stem packing and the ability to provide leak off sensing, these products are suitable for applications involving toxic media, where extra surety of containment is desired, and also where a lower level of fugitive emissions is valued. Consult factory for guidance.

Product	Sizes	Pressure class	Maximum temperature	Body/Trim materials <sup>1</sup>	Bulletin
<b>Emission-Pak assembly for 7000 series standard bore valves</b>	½" – 8" (DN15 – 200)	Class 150 Class 300	500 °F (260 °C)	Carbon steel Stainless steel Other alloys	B107-1
<b>Emission-Pak assembly for 9000 series full bore valves</b>	½" – 6" (DN15 – 150)	Class 150 Class 300	500 °F (260 °C)	Carbon steel Stainless steel Other alloys	B107-2



## Spring-return handles

Torq-Handle™ spring-return handles offer reliable, automatic opening and closing of manual valves in a piping system. Remains in position as long as it's held firmly by hand. Returns to predetermined position when released. Also available with fusible or electrothermal links

**Bulletin: B160-1**



## Limit switches

Available for most ¼" – 6" (DN8 – 150) manually operated ball and butterfly valves whenever indication of valve position is required. Applications include control of signaling devices and panel lights. Available for FM, CSA, NEMA 4, NEMA 7 and ATEX/IECEx applications.



## Locking devices

Locking devices are available to hold a wide range of Jamesbury valves inoperative when safety measures are necessary for line maintenance, handling hazardous or valuable fluids, or for applications covered by certain government regulations.

<sup>1</sup> Consult factory for specific material availability.





# Maximize cycle life with Jamesbury high-performance butterfly valves

The combination of a unique off-center disc, proprietary seat design, Xtreme™ sealing technology, and other features make our Wafer-Sphere™ high-performance butterfly valve a tight-sealing, long-lasting, yet lighter and lower-cost alternative to gate valves and other heavier rotary-type designs.

- Compact size – puts less stress on the piping system.
- Easier maintenance – no need to remove pins, shafts or discs. Insert removes for easy access to the seat. The insert and seat are both self-adjusting.
- Longer cycle life – Xtreme seat materials have proven to outperform the competition – life cycle improvements of 500% have been documented.
- Tighter sealing – unique seating principle creates a more reliable bubble-tight seal.
- Wider pressure and temperature range – proprietary Xtreme seating material broadens Wafer-Sphere butterfly valve's temperature and pressure applicability. The Wafer-Sphere entire product offering can meet a temperature range from -320 °F to 500 °F (-196 °C to 260 °C) and pressure up to 1480 psi (102 bar).
- Easier automation – accommodates a variety of actuation options and digital positioners for control service.
- Lower cost-of-acquisition/ownership – a more competitive purchase and installation price than gate and other heavier rotary-type valves.

## Key features:

- Positive shaft retention and blow-out mechanism prevents movement of the shaft past the compression plate.
- Polymeric seat assures positive shut-off, compensating for wear to extend life.
- Easy maintenance — only the insert needs to be removed to replace the seat. The insert and seat are self-aligning.
- Wafer-Sphere Fire-Tite™ valves meet the requirements of API 607 and ISO with a secondary metal seat that ensures tight sealing before, during and after a fire.
- Low output torque requirements allow the use of less costly actuators.
- Available in ASME 150 lb. (Series 815), 300 lb. (Series 830), and 600 lb. (Series 860) pressure classes — in wafer and in single-flanged lugged designs.
- Available in a broad range of materials for standard and special services including chlorine, oxygen, cryogenics and vacuum.

# High-performance butterfly valves



## Series 815/830/860

Series 815/830/860 valves are available in wafer and single-flanged lugged designs for dead-end service for ASME class 150, 300 and 600 pressure class applications. All available in both lugged and wafer style to meet NACE MR0175 and MR0103.

Product	Sizes	Body style	Max. pressure	Max. temperature	Body/Trim materials <sup>1</sup>	Seat materials	Bulletin
<b>ANSI class 150 series 815 butterfly valves</b>	2 ½" – 30" (DN65 – 750)	Wafer	285 psi (19.6 bar)	500 °F (260 °C)	Carbon steel 316SS Alloy 20 254SMO® Monel Hastelloy C	Teflon® Xtreme UHMW	W101-6
	2 ½" – 60" (DN65 – 1500)	Lugged					
<b>ANSI class 150 series F815 butterfly valves</b>	3" – 30" (DN80 – 750)	Wafer	285 psi (19.6 bar)	500 °F (260 °C)	Carbon steel 316SS Alloy 20 254SMO® Monel Hastelloy C	316SS/PTFE 316SS/XT	W101-6
	3" – 60" (DN80 – 1500)	Lugged					
<b>ANSI class 300 series 830 butterfly valves</b>	3" – 30" (DN80 – 750)	Wafer	740 psi (51 bar)	500 °F (260 °C)	Carbon steel 316SS Alloy 20 254SMO® Monel Hastelloy C	Teflon® Xtreme UHMW	W101-6
	3" – 36" (DN80 – 900)	Lugged					
<b>ANSI class 300 series F830 butterfly valves</b>	3" – 30" (DN80 – 750)	Wafer	740 psi (51 bar)	500 °F (260 °C)	Carbon steel 316SS Alloy 20 254SMO® Monel Hastelloy C	316SS/PTFE 316SS/XT	W101-6
	3" – 36" (DN80 – 900)	Lugged					
<b>ANSI class 600 series 860 butterfly valves</b>	3" – 24" (DN80 – 600)	Wafer	1480 psi (102 bar)	500 °F (260 °C)	Carbon steel 316SS	Xtreme	W104-1
		Lugged					
<b>ANSI class 600 series F860 butterfly valves</b>	3" – 24" (DN80 – 600)	Wafer	1480 psi (102 bar)	500 °F (260 °C)	Carbon steel 316SS	316SS/PTFE	W104-1
		Lugged					

Teflon is a registered trademark of E.I. du Pont de Nemours and Company.  
254SMO is a registered trademark of Avesta Sheffield.

# High-performance butterfly valves



## Series 835

Series 835 process-rated ASME class 150 high-performance Wafer-Sphere butterfly valves are an excellent, cost-effective solution for shut-off pressures up to 100 psi. The series 835 provides the same long-lasting tight shut-off capability, excellent flow characteristics and long service life as the fully ASME-rated series 815.

Product	Sizes	Body style	Max. pressure	Max. temperature	Body/Trim materials <sup>1</sup>	Seat materials	Bulletin
<b>ANSI class 150 series 835 butterfly valves</b>	30" – 60" (DN750 – 1500)	Lugged	100 psi (6.9bar)	500 °F (260 °C)	Carbon steel 316SS Alloy 20 254SMO® Monel Hastelloy C	Teflon® Xtreme	W105-1
<b>ANSI class 150 series F835 butterfly valves</b>	30" – 60" (DN750 – 1500)	Lugged	100 psi (6.9bar)	500 °F (260 °C)	Carbon steel 316SS Alloy 20 254SMO® Monel Hastelloy C	316SS/PTFE	W105-1



## Series K815/K830/K860

Series K815/K830/K860 cryogenic designs offer the same features and benefits, and are designed to operate in cryogenic applications such as air separation to -320 °F (-196 °C).

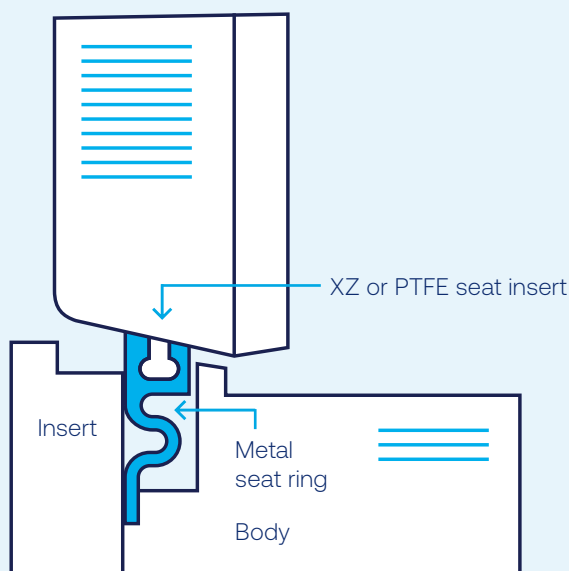
Product	Sizes	Body style	Max. pressure	Max. temperature	Body/Trim materials <sup>1</sup>	Seat materials	Bulletin
<b>ANSI class 150 cryogenic services series K815 butterfly valves</b>	3" – 12" (DN80 – 300)	Wafer	275 psi (19 bar)	-320 – +100 °F (-196 – +38 °C)	316SS Monel	316SS/PTFE	W130-1
		Lugged					
	14" – 30" (DN350 – 750)	Wafer	275 psi (19 bar)	-320 – +100 °F (-196 – 38 °C)	316SS Monel	KEL-F	W130-1
		Lugged					
<b>ANSI class 300 cryogenic services series K830 butterfly valves</b>	3" – 12" (DN80 – 300)	Wafer	720 psi (49.6 bar)	-320 – +100 °F (-196 – 38 °C)	316SS Monel	316SS/PTFE	W130-1
		Lugged					
	14" – 30" (DN350 – 750)	Wafer	720 psi (49.6 bar)	-320 – +100 °F (-196 – 38 °C)	316SS Monel	KEL-F	W130-1
		Lugged					
<b>ANSI class 600 cryogenic services series K860 butterfly valves</b>	3" – 12" (DN80 – 300)	Wafer	1440 psi (99.3 bar)	-320 – +100 °F (-196 – 38 °C)	316SS Monel	316SS/PTFE	W130-1
		Lugged					

## Wafer-Sphere Fire-Tite butterfly valves

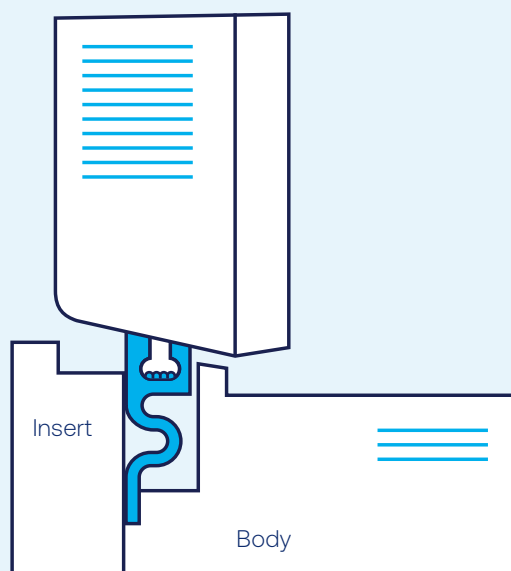
Wafer-Sphere Fire-Tite valves offer outstanding advantages in providing reliable operation in normal service and when fire strikes. Specifically developed for use in such industries as petroleum refining and distribution, chemical, marine and others.

The metal seat ring effectively stops flow through the valve if the Xtreme or PTFE seat is destroyed in the fire. Fire-Tite valves meet the requirements of NACE and are qualified to API-607 and ISO fire testing specifications. Available in series F815, F830, F860 & F835 models for manual or automatic operation.

**Before fire**



**During and after fire**





# Special service butterfly valves

## High-cycle butterfly valves

Testing indicates that a combination of components – including Xtreme seats, filled enhanced PTFE shaft seals, metal-backed/fabric-lined shaft bearings, PEEK-filled PTFE thrust bearings, and bearing seals – will yield significantly longer life than standard configuration valves.

## Steam service butterfly valves

Wafer-Sphere butterfly valves are well-suited for a wide variety of on-off saturated steam applications up to 450 psi.

**Bulletin: W150-1**

## Chlorine service

Wafer-Sphere valves are available specially prepared for chlorine service.

**Bulletin: W150-2**

## Oxygen service butterfly valves

A complete line of valves is available for oxygen applications, ranging from air separation to basic oxygen steel furnace systems. To ensure these valves are compatible with oxygen, rigid material cleaning, handling, assembly and packaging procedures are carefully followed.

**Bulletin: W150-3**

## Vacuum service butterfly valves

The standard Wafer-Sphere valve is capable of vacuum service of  $2 \times 10^{-2}$  Torr. For high-vacuum service, its specially cleaned seat and packing assure a leakage rate of no more than  $1 \times 10^{-6}$  standard cc/sec. of helium. When required, valves can be certified with a helium mass spectrometer.

**Bulletin: W150-4**

## Jacketed butterfly valves

Wafer-Sphere high-performance butterfly valves are available with welded or bolt-on jackets.

**Bulletin: W151-3**

## Hydrogen peroxide butterfly valves

Wafer-Sphere uniquely designed and prepared to handle the fluid properties of hydrogen peroxide, and keep decomposition to a minimum.

**Bulletin: B150-5**



# Improve process efficiency with Jamesbury actuators

Jamesbury actuator solutions provide safe, smooth, and trouble-free operation. Their rugged construction and innovative designs provide a cycle life far beyond competitor products.

# Electric, pneumatic & manual actuators



## Valv-Powr™ VPVL

The Valv-Powr VPVL actuator is suitable for all process applications. It is a favorite in the chemical industries because of its compact design. It offers several added corrosion treatments such as electroless nickel, hard anodized protection, and PTFE coating.

Product	Type	Action	Recommended input	Torque output	Bulletin
<b>Valv-Powr VPVL model D</b>	Pneumatic rack & pinion	Double acting	40 – 116 psi (2.7 – 8.0 bar)	6.8 – 4582 ft·lb (9.2 – 6212 N·m)	A111-5
		Spring return	60 – 120 psi (4.1 – 8.0 bar)	4.4 – 1627 ft·lb (5.9 – 2207 N·m)	



## Quadra-Powr™ X

The Quadra-Powr X spring-diaphragm actuator is a unique solution that provides exceptionally smooth and reliable control actuation for 90° rotary valves. It combines the low air pressure requirements of a diaphragm actuator with the high pressure capacity of a piston actuator. The result is smoother, more accurate operation (even at minimal supply pressures), and longer cycle life.

Product	Type	Action	Recommended input	Torque output	Bulletin
<b>Quadra-Powr X</b>	Pneumatic diaphragm	Spring return	20 – 100 psi (1.4 – 6.9 bar)	11 – 587 ft·lb (15 – 796 N·m)	A110-4



## B-Series

B-Series piston actuators are available in either double-acting or spring-return versions. The series B1C and B1J provide for mounting in accordance with ISO 5211/1. These actuators offer an extremely long life cycle and are well suited to operate any type of rotary valve. Robust cast iron construction is good for refineries where aluminum is prohibited.

Product	Type	Action	Recommended input	Torque output	Bulletin
<b>B-Series</b>	Pneumatic piston	Double acting	43 – 120 psi (3.0 – 8.5 bar)	30 – 75630 ft·lb (45 – 102710 N·m)	6 B 20
		Spring return	43 – 120 psi (3.0 – 8.5 bar)	21 – 9000 ft·lb (28 – 12200 N·m)	

# Electric, pneumatic & manual actuators



## MRG Series

MRG Series actuators are fully enclosed, weather-proof, all-cast-iron and carbon-steel construction. They are factory lubricated for their lifetime, requiring no future lubrication. Each unit includes a pointer to indicate valve position.

Product	Type	Action	Recommended input	Torque output	Bulletin
<b>MRG Series</b>	Manual gear operated	Handwheel	12 – 170 ft·lb (16 – 145 N·m)	111 – 19177 ft·lb (150 – 260000 N·m)	A100-3



## V-Series

V-Series electric actuators are utilized for accurate positioning of dampers and valves in the aerospace, automotive, consumer services, discrete manufacturing, energy, environmental, oil/pipeline, petrochemical, power/utilities, process, recreation, transportation, and water/wastewater industries. Enclosure options: NEMA 4/4X, and 4/4X/7&9; cCSAus and CE compliance is standard on all models; “WX” models include ATEX and IECEx Certification as well.

Product	Type	Action	Available input voltages	Torque output	Bulletin
<b>V-Series</b>	Electric	Reversing	115/230 VAC	150 – 3000 in·lb (17 – 339 N·m)	V200-1



## ADC-Series

ADC-Series continuous-duty electric actuators, with optional battery back-up power, are ideal for the accurate positioning of dampers and valves, and provide a great alternative to mechanical spring-return actuation, with our very power-dense Li Ion battery option. The actuators are utilized in the aerospace, automotive, consumer services, discrete manufacturing, energy, environmental, oil/pipeline, petrochemical, power/utilities, process, recreation, transportation, and water/wastewater industries. Enclosure options: NEMA 4/4X, and 4/4X/7&9; cCSAus and CE compliance is standard on all models; “WX” models include ATEX and IECEx Certification as well.

Product	Type	Action	Universal input voltage	Torque output	Bulletin
<b>ADC-Series</b>	Continuous-duty electric, with optional back-up power	Reversing	24/115/230 VAC 12/24 VDC	150 – 3000 in·lb (17 – 339 N·m)	V201-1 V201-2



# Electric, pneumatic & manual actuators



## LCU-Series

LCU offers simple, economical and reliable automatic control of quarter-turn valves.  
Enclosures: NEMA 4/4X

Product	Type	Action	Available input voltages	Torque output	Bulletin
<b>LCU-Series</b>	Electric	Unidirectional	24/115/230 VAC 12/24 VDC	150 – 600 in-lb (17 – 68 N-m)	V202-1



## LCR-Series

LCR offers simple, economical and reliable automatic control of quarter-turn valves.  
Enclosures: NEMA 4/4X

Product	Type	Action	Available input voltages	Torque output	Bulletin
<b>LCR-Series</b>	Electric	Reversing	24/115/230 VAC 12/24 VDC	150 – 600 in-lb (17 – 68 N-m)	V203-1



## ESR, I, QX & Q6-Series

ESR, I, QX & Q6-Series electric actuators are utilized for accurate positioning of dampers and valves in the aerospace, automotive, consumer services, discrete manufacturing, energy, environmental, oil/pipeline, petrochemical, power/utilities, process, recreation, transportation, and water/wastewater industries.

Enclosures: NEMA 4/4X, and 4/4X/7&9

Product	Type	Action	Available input voltages	Torque output	Bulletin
<b>ESR-Series</b>	Electric – spring return	Reversing	115/230 VAC	150 – 600 in-lb (17 – 68 N-m)	V204-1
<b>I-Series</b>	Electric – network capable	Reversing	115/230 VAC	150 – 3000 in-lb (17 – 339 N-m)	V206-1
<b>QX-Series</b>	Electric	Reversing	112/24 VDC	150 – 3000 in-lb (17 – 339 N-m)	V207-1
<b>Q6-Series</b>	Electric	Reversing	12 VDC	150 – 600 in-lb (17 – 68 N-m)	V205-1

# Improve maintenance planning with valve monitoring and communication

Neles offers a full array of valve monitoring and communication solutions to facilitate connectivity of on-off valves to your plant networks. This provides advanced diagnostics and data collection from on-off valves for improved maintenance decision-making.

Neles and StoneL™ products integrate high-reliability controllers, solid-state sensors and field-proven two-wire communications to offer new cost-cutting solutions. They are constructed especially for restrictive hazardous areas.



## Key capabilities:

- Solid-state discrete position sensing systems
- Field-based communication integration and networking
- Explosion-proof/flame-proof metallic enclosures
- High-durability engineered resin enclosures
- Environmental encapsulation of electronics
- Pneumatic pilot valve systems
- Mechanical adapting systems

# Valve controllers, limit switches and sensors



## Neles ND9000™ intelligent valve controller

This top class valve controller is designed to operate on every control valve actuator and in all industrial areas. Simple configuration through the local user interface eases commissioning activities while advanced diagnostic trending allows for performance optimization and proactive maintenance. **Bulletin: 7 ND90 21**



## Neles NDX™ valve controller

Technology and design exists to make life effortless and more efficient. The Neles NDX valve controller has been designed with a strong focus on the user experience. It provides a solution for all valve brands in standard applications regardless of customer or industry. In addition to the robustness and reliability you'd expect from a valve controller from Neles, the product is extremely easy to install and use.

**Bulletin: 7 NDX 21**



## Neles ValvGuard™ VG9000 intelligent safety valve controller

A new generation safety valve controller and partial stroke testing device for emergency shutdown valves. The safety valve condition is monitored through diagnostic data gathered during pneumatics tests, partial stroke tests, and emergency trip tests. With market leading pneumatics capacity and integrated limit switches, instrumentation is simplified while mitigating safety risks. **Bulletin: 9 VG9 21**



## Axiom™ valve controller for hazardous areas & general purposes

The Axiom platform, available in epoxy-coated anodized aluminum or stainless steel, will withstand your most challenging plant environments. Its advanced position monitoring and integral pneumatic control offer the ultimate in reliability, convenience, and value. **Bulletin: 7 AM 21, 7 AX 21, 7 AN 20**



## Quartz™ limit switch for hazardous areas & general purposes

The Quartz is available in explosion/flame proof (QX), intrinsically safe and nonincendive (QN) and general purpose (QG) versions. The robust urethane coated anodized aluminum construction makes this platform extremely durable and well suited for use in corrosive, heavy wash down environments. **Bulletin: 7 QZ 22**



## Eclipse™ limit switch for hazardous areas & general purposes

The Eclipse features dual solid state sensors with optional communications integrated into a sealed module. The function module and trigger/indicator attach quickly and conveniently to standard VDI/VDE 3845 (Nemur) actuator accessory mounting pads with appropriate mounting kit. The Eclipse series is available in intrinsically safe and nonincendive versions (EN) for hazardous areas with a removable module and in a general purpose completely sealed micro-connector version (EG). **Bulletin: 7 ECL 21**



## Hawkeye™ linear point sensor

The solid state Hawkeye sensor is ideal for point sensing in corrosive and hazardous process environments. The standard red/green LEDs (HK) also speed your setup and installation by confirming power up and switch status. **Bulletin: 7 HK 21, 7 HX 21**

# Find out more. Get in touch.

To find out more about Neles flow control solutions for process industries, please get in touch or read more online at [neles.com](http://neles.com)

P302BEN, issue 10/2021. Neles, Jamesbury and Easyflow by Neles, and certain other trademarks, are either registered trademarks or trademarks of Neles Corporation or its subsidiaries or affiliates in the United States and/or in other countries. For more information [www.neles.com/trademarks](http://www.neles.com/trademarks)

Neles Corporation  
Vanha Porvoontie 229  
01380 Vantaa, Finland  
[flowcontrol@neles.com](mailto:flowcontrol@neles.com)  
+358 10 417 5000

Neles USA Inc.  
44 Bowditch Drive  
P.O. Box 8044 Shrewsbury  
MA 01545 USA  
+1 508 852 0200