jamesbury

Wafer-Sphere® High-Performance Butterfly Valves

metso automation

Wafer-Sphere® valves have been proven in thousands of real world applications to reduce total process costs.

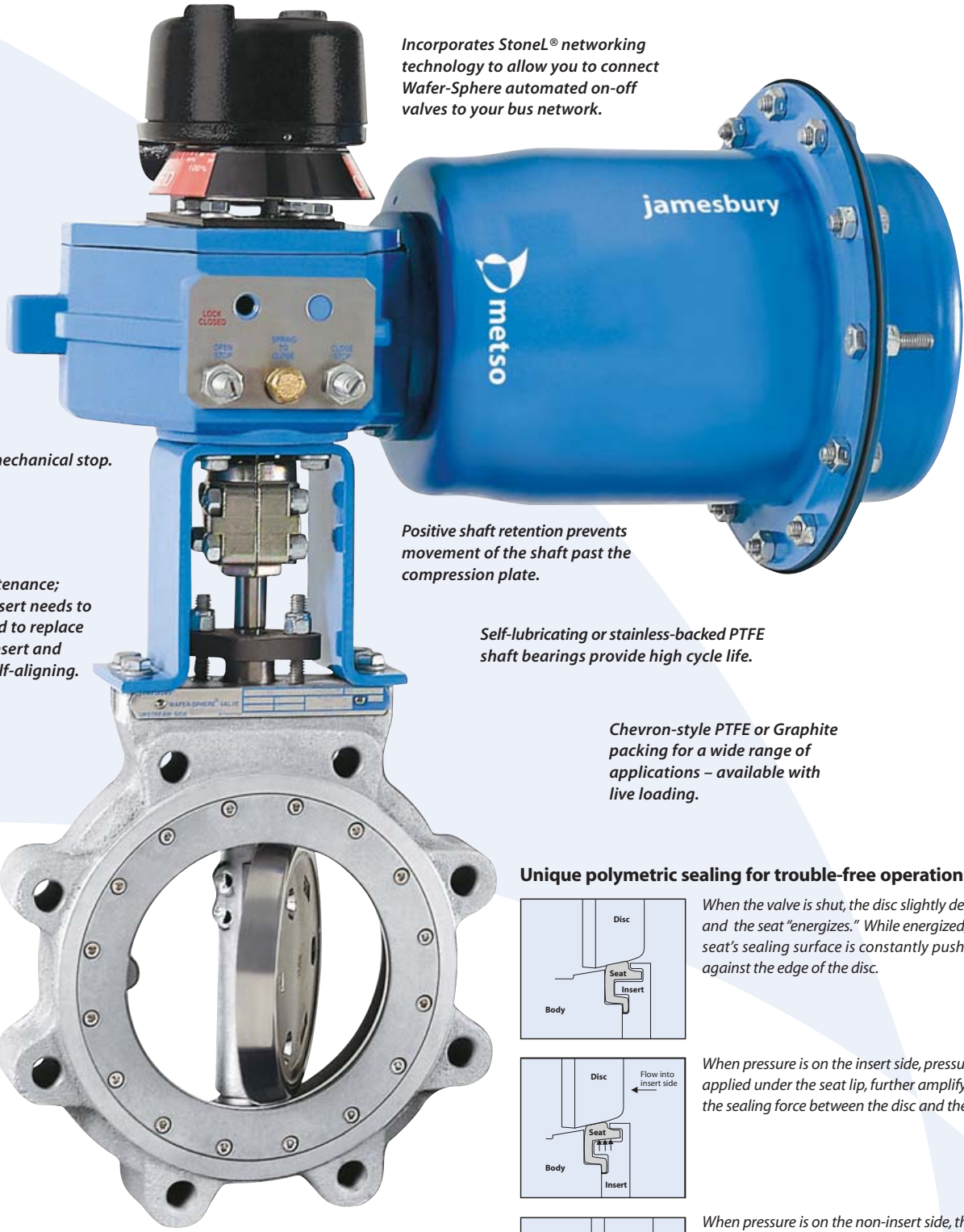
Performance Advantages Over Ordinary Valves.

Compared with traditional butterfly valves and many other valve types, Wafer-Sphere® butterfly valves deliver several unique benefits:

- **Higher pressure ratings** – Jamesbury® high-performance butterfly valves are rated at ANSI 150, 300 and 600 pressure classes. They offer proven reliability in applications ranging from vacuum to very high pressure.
- **Wider applications range** – a wide variety of body and seat materials allows you to handle virtually any media, including steam, corrosives, raw water, chlorine, sour petroleum, solid oxidizers and abrasives.
- **Wider temperature range** – with Xtreme® sealing materials, Wafer-Sphere butterfly valves are fully rated to replace costlier valves in cryogenic (-420°F) to high-temperature (500°F) applications.
- **Easier automation** – like traditional butterfly valves, Wafer-Sphere high-performance butterfly valves are always easier to automate than gate valves, and often easier to automate than other rotary valves.
- **A low-cost environmental solution** – with Emission-Pak® assemblies and our unique, retrofittable stem sealing device, Wafer-Sphere valves can easily be adapted to comply with evolving emissions regulations.
- **Unique polymeric seats offer exceptional reliability** – our unique polymeric seat design offers long-term tight shut-off and exceptional reliability, even under demanding process conditions.
- **Lower installed cost and higher performance than gate valves** – Wafer-Sphere high-performance butterfly valves are designed to replace gate valves in most applications, whether for easier automation or simply for lower cost and improved performance. This is truly one case where less is more.
- **Increased safety assurance** – in difficult applications, like steam, the reliable, tight sealing of Wafer-Sphere high-performance butterfly valves reduces fugitive emissions.

Wafer-Sphere® High-Performance Butterfly Valves — A Closer Look.

Nothing compares when you take a close look at Wafer-Sphere butterfly valves. See for yourself what makes it the most preferred brand of high-performance butterfly valve.



Incorporates StoneL® networking technology to allow you to connect Wafer-Sphere automated on-off valves to your bus network.

Positive mechanical stop.

Positive shaft retention prevents movement of the shaft past the compression plate.

Easy maintenance; only the insert needs to be removed to replace the seat; insert and seat are self-aligning.

Self-lubricating or stainless-backed PTFE shaft bearings provide high cycle life.

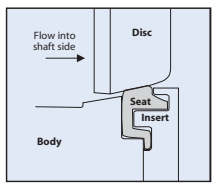
Chevron-style PTFE or Graphite packing for a wide range of applications – available with live loading.

Flexible-lip polymeric seat assures positive shut-off and, when coupled with the offset disc, compensates for wear.

Unique polymetric sealing for trouble-free operation.

When the valve is shut, the disc slightly deflects and the seat "energizes." While energized, the seat's sealing surface is constantly pushing against the edge of the disc.

When pressure is on the insert side, pressure is applied under the seat lip, further amplifying the sealing force between the disc and the seat.



When pressure is on the non-insert side, the disc moves into the seat. Due to the spherical profile of the disc, the more the disc moves into the seat, the tighter the shut-off. Excessive movement of the seat is limited by the flexible lip, which contacts the bottom of the grooves in the insert ring.

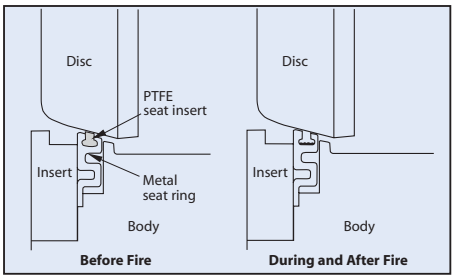
Tighter, More Reliable Sealing: A Matter Of Principle.

What turns an ordinary butterfly valve into a high-performance butterfly valve? It begins with an offset shaft and eccentric disc arrangement. This unique offset design transmits a camming action to the disc and swings the disc completely away from the seat. Conventional butterfly valves do not have this feature.

This design eliminates wear points around the disc at the top and bottom of the seat, as well as the resulting beading, scuffing, and ultimate tearing and leakage. When closed, the disc cams tightly into its seat to create a dependable tight seal.

Fire-Tite® Wafer-Sphere® Butterfly Valves.

Fire-Tite Wafer-Sphere valves offer outstanding advantages in providing reliable operation in normal service and when fire strikes. It is 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 PTFE seat is destroyed in the fire. Fire-Tite valves meet the requirements of NACE and are qualified to API 607 Edition 4 and BS 6755.



Equally Suited To On-Off And Control Applications.

Wafer-Sphere butterfly valves accommodate a variety of pneumatic and electric actuators for on-off service, as well as pneumatic double-acting and spring-return actuators with positioners for control service. They offer superior control characteristics, wide rangeability and an inherent flow characteristic that is modified equal percentage.

Cryogenic Service

Series	Body Style	Size Range	Maximum Pressure/Temp.	Minimum Pressure/Temp.	Body/Trim Materials	Seat Materials
K815	ANSI 150 Wafer Lugged	3″ - 30″ (DN 80-750)	285 psi @ 100°F (19.6 bar @ 37.7°C)	-425°F @ 285 psi (-254°C @ 19.6 bar)	316 SS Monel®	316 SS/PTFE (3″ - 12″ sizes) KEL-F (14″ + sizes)
K830	ANSI 300 Wafer Lugged	3″ - 24″ (DN 80-600)	720 psi @ 100°F (49.6 bar @ 37.7°C)	-425°F @ 285 psi (-254°C @ 49.6 bar)		
K860	ANSI 600 Wafer Lugged	3″ - 12″ (DN 80-300)	1440 psi @ 100°F (99 bar @ 37.7°C)	-425°F @ 285 psi (-254°C @ 99 bar)		316 SS/PTFE (all sizes)

ANSI Class 150

Series	Body Style	Size Range	Maximum Pressure/Temp.	Minimum Pressure/Temp.	Body/Trim Materials	Seat Materials
815	Wafer	2-1/2″ - 30″ (DN 65-750)	285 psi @ 100°F (19.6 bar @ 37.7°C)	500°F @ 285 psi (260°C @ 19.6 bar)	Carbon Steel 316 SS Ductile Iron Alloy 20 Avesta 254SMO® Monel® Hasteloy® Titanium	Teflon Xtreme® Polyethylene FEP PFA
	Lugged	2-1/2″ - 60″ (DN 65-1500)				
F815	Wafer	3″ - 30″ (DN 80-750)	285 psi @ 100°F (19.6 bar @ 37.7°C)	500°F @ 50 psi (260°C @ 3.4 bar)		316 SS/PTFE
	Lugged	3″ - 60″ (DN 80-1500)				
835	Lugged	30″ - 60″ (DN 750-1500)	100 psi @ 500°F (6.9 bar @ 260°C)	500°F @ 100 psi (198.9°C @ 6.9 bar)		Teflon® Xtreme® Filled Teflon®
F835			100 psi @ 390°F (6.9 bar @ 198.9°C)	390°F @ 100 psi (198.9°C @ 6.9 bar)		316 SS/PTFE

ANSI Class 300

Series	Body Style	Size Range	Maximum Pressure/Temp.	Minimum Pressure/Temp.	Body/Trim Materials	Seat Materials
830	Wafer	3″ - 30″ (DN 80-750)	740 psi @ 100°F (51 bar @ 37.7°C)	500°F @ 375 psi (260°C @ 25.8 bar)	Carbon Steel 316 SS Alloy 20 Avesta 254SMO® Monel® Hasteloy® Titanium	Teflon® Xtreme®
F830	Lugged	3″ - 36″ (DN 80-900)				
F830	Wafer	3″ - 30″ (DN 80-750)	740 psi @ 100°F (51 bar @ 37.7°C)	500°F @ 50 psi (260°C @ 3.4 bar)		316 SS/PTFE
	Lugged	3″ - 36″ (DN 80-900)				

ANSI Class 600

Series	Body Style	Size Range	Maximum Pressure/Temp.	Minimum Pressure/Temp.	Body/Trim Materials	Seat Materials
860	Wafer Lugged	3″ - 24″ (DN 80-600)	1440 psi @ 100°F (99.3 bar @ 37.7°C)	500°F @ 200 psi (260°C @ 13.8 bar)	Carbon Steel 316 SS	Filled Teflon®
F860	Wafer Lugged			500°F @ 50 psi (260°C @ 3.4 bar)		316 SS/PTFE

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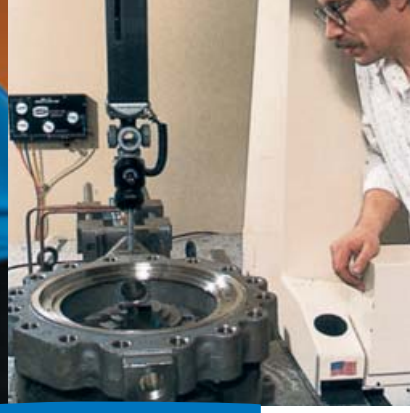
Hastelloy® is a registered trademark of Haynes International, Inc.
Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.
Avesta 254SMO® is a registered trademark of Avesta Sheffield.



Why Wafer-Sphere® High-Performance Butterfly Valves?

Jamesbury® brand valves have always been recognized leaders in valve technology. For nearly 50 years, their unique features have been field-proven to provide trouble-free shut-off in thousands of applications just like yours. This experience allows us to provide a butterfly valve that can lower your costs without risking performance.

Our Wafer-Sphere high-performance butterfly valve combines a special off-center disc with proprietary seat designs and revolutionary Xtreme® sealing technology, to provide you with the tightest-sealing, longest-lasting, lowest-cost alternative to gate valves, as well as to other heavier, rotary-type valves.

Since their cycle life is far greater than a traditional butterfly valve, Wafer-Sphere high-performance butterfly valves are often a more cost-effective solution even for applications without high-performance service demands.

They are especially suitable for applications in grain/corn processing, chemicals, petrochemicals, power, refining, steel, air separation, HVAC and more.

Gate Valves

- Heavier and more space required
- Difficult to repair

Wafer-Sphere® High-Performance Butterfly Valves

- Low maintenance
- Lower cost of ownership
- Ease of automation
- Ease of repair

Expanding Performance Boundaries With Xtreme®

When combined with our unique and application-proven seat designs, proprietary Xtreme seating materials broaden Wafer-Sphere butterfly valves' temperature and pressure applicability. With Xtreme seats, application temperatures range from -420°F to 500°F and pressures up to 1480 psi. Low permeability characteristics and controlled crystallinity produce a valve seat with less permanent distortion. This results in longer cycle life, better thermal cycle performance and better pressure cycle capability.

Delivering High-Performance Service As Well.

When you choose Metso Automation, you can count on our service as well. That's because you are choosing a partner who is a worldwide, full-service supplier dedicated to providing you with the most appropriate valve solution for each and every application…including after-sale service.

Metso Automation is an expert at solving problems in fluid flow. From innovative design to quality manufacture, our full line of high-quality, high-performance products is the result of our commitment to proactively meet the industry's complete needs. A dedicated organization of local stocking distributors, OEM service centers and field personnel is available to meet your requirements.

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