QUARTER-TURN SOLUTIONS FOR

FUGITIVE EMISSIONS

Bray®

BRAY.COM

THE HIGH PERFORMANCE COMPANY

KEEPING OUR AIR CLEAN

Recognizing the importance of sustainability, socially responsible organizations have begun looking for ways to mitigate the environmental impact of their operations. These efforts have brought attention to the volume of volatile organic compounds released by industrial manufacturing processes. With unintentional leaks from industrial equipment, like valves, comprising the vast majority of these fugitive emissions, environmental agencies have been forced to establish emissions standards often imposing heavy fines on those in violation.

These economic and ecologic implications have solidified Bray's commitment to helping organizations around the world tighten their grip on fugitive emissions. Designed to comply with API 641, ISO 15848, and TA Luft VDI 2440 test standards, our industry leading range of low-emissions quarter turn valves are certified for maximum compliance with minimum environmental impact.

FUGITIVE EMISSION TEST FACILITIES

Bray R&D lab facilities in Houston, India, and China include safe, dedicated areas with extensive gas leakage detection equipment for product development, validation, and production testing. Run by trained and experienced fugitive emissions specialists, our facilities include:

- Helium Mass Spectrometer
- Tracer gas leak standards with calibrated depletion rates for accurate and precise testing and pressures up to 6,000 psi
- Fugitive emissions measurement capabilities at extreme temperatures [Full cryogenic -320°F to 1,000°F (-196°C to 538°C)]

Raymond Technical Center - Houston

INDUSTRIES & APPLICATIONS

Terminals and Storage

Refineries

Chemical Plants

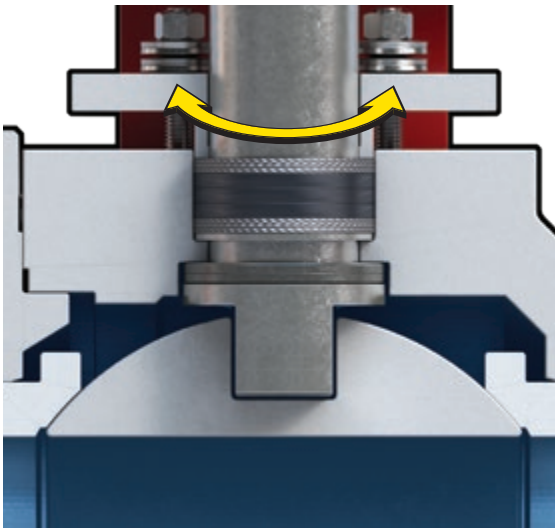
Petrochemical Plants

CERTIFICATIONS

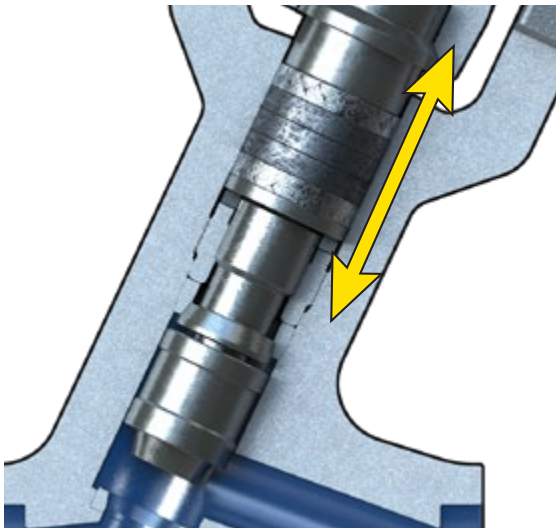
Product Line		API 641	ISO 15848-1	TA Luft VDI 2440
Ball Valves	M1	✓	✓	
	F15/F30	✓	✓	✓
	RF15/RF30	✓	✓	✓
	Triad	✓	✓	
	7000/8000	✓	✓	✓
	S85	✓	✓	
	Trunnion		✓	
Butterfly Valves	Acris		✓	
	Tri Lok	✓	✓	✓
	McCannalok	✓	✓	✓
	McCannalok EN		✓	✓

BENEFITS OF BRAY'S QUARTER TURN VALVES VS. RISING STEM VALVES

Quarter Turn (Ball, Butterfly Valve)



Linear/Rising (Globe, Gate, etc.)



ADVANTAGES		DISADVANTAGES
Short 90 degree stem motion	VS	Longer vertical stem travel
Stem rotates perpendicular to leak path	VS	Stem moves parallel with leak path
Packing wear minimized	VS	Packing wear more prominent
API 641 Certification is more demanding requires 610 mechanical cycles ISO 15848-1 CO3 Endurance Class cycling requires 2,500 mechanical cycles.	VS	API 624 Certification is less demanding 310 mechanical cycles

TRI LOK®
TRIPLE OFFSET BUTTERFLY VALVES

Size Range	3″ – 48″ (80mm – 1200mm)
Body Style	Wafer | Lug | Flanged | Gate
Temperature Range	-320°F to 842°F (-196°C to 450°C)
Pressure Ratings	ASME Class 150 | 300 | 600
Shutoff Rating	Zero Leakage
Body Materials	Carbon Steel | Stainless Steel
Disc Materials	Carbon Steel | Stainless Steel
Stem Materials	17-4PH | XM-19 (Nitronic®) | 410 Stainless Steel
Body Seat Materials	316 Stainless Steel Hardened
Disc Seal Material	318 Stainless Steel Duplex/Graphite
Applications	Refining | Petrochemical | Storage Tanks | LNG | Chemical

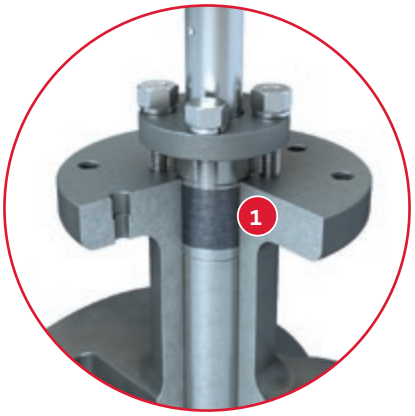
FUGITIVE EMISSIONS RATINGS

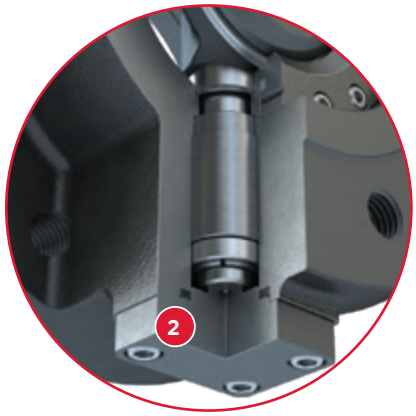
API641	Valve Group	A
	Temperature	500°F (260°C)
	Pressure	600 psig (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure Class	CL 150/300/600
TA Luft VDI 2440 Compliant		

KEY FEATURES

1. **Packing**
Low fugitive emissions certified packing. Prevents emissions from escaping through stem bore. API 622 certified graphite packing used to ensure product quality.

2. **Static Gasket**
Static gasket on the bottom plate to prevent any emissions from escaping the bottom bore of the valve.





MCCANNALOK
HIGH PERFORMANCE BUTTERFLY VALVES

Size Range	2 1/2" - 60" (65mm - 1650mm)
Body Style	Wafer | Lug | Double Flanged
Temp. Range	-62°F to 500°F (-52°C to 260°C)
Pressure Ratings	ASME Class 150 | 300 | 600
Shutoff Rating	Zero Leakage
Body Materials	Carbon Steel | Stainless Steel
Disc Materials	Stainless Steel
Stem Materials	Stainless Steel
Seat Materials	Resilient Seat - RPTFE w/Resilient Energizer Fire Safe - RPTFE w/Resilient Energizer and Inconel® backup Metal Seated - Inconel®
Applications	Refining | Petrochemical | Chemical

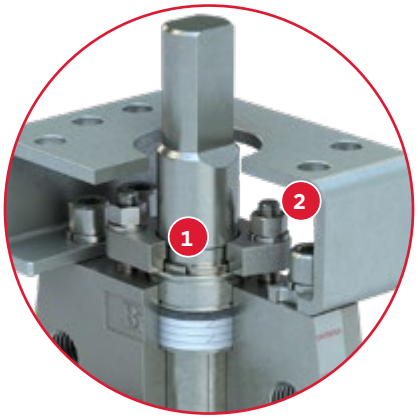
Inconel® is a registered trademark of Special Metals, Inc.

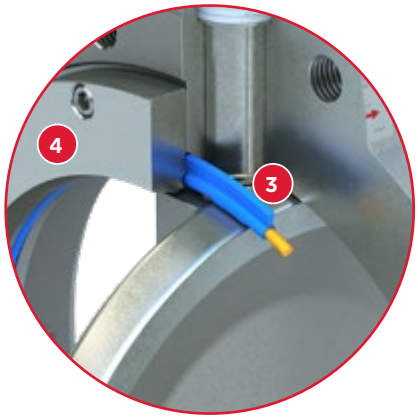
FUGITIVE EMISSIONS RATINGS

API641	Valve Group	A
	Temperature	500°F (260°C)
	Pressure	600 psig (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	CO3
	Temperature	392°F (200°C)
	Pressure Class	CL 150/300
TA Luft VDI 2440 Compliant		

KEY FEATURES

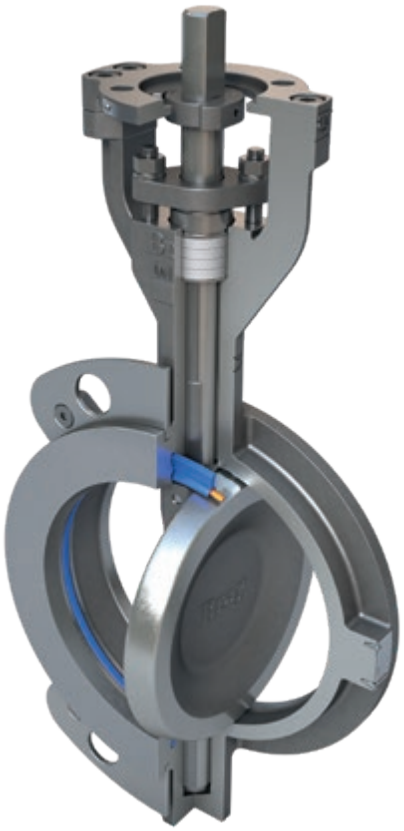
1. **Blowout-Proof Stem**
   The stem retention design does not rely on actuation components to prevent stem blowout.
2. **Adjustable Stem Packing**
   Easy access allows simple quarter-turn adjustments without actuator removals
3. **Bidirectional Resilient Seat:** Provides bidirectional zero-leakage sealing while isolating the energizer from line media. (Firesafe option available.)
4. **Full-Faced Seat Retainer:** Cap screws located outside sealing area are protected from corrosion while allowing simple seat replacement.





MCCANNALOK EN
HIGH PERFORMANCE BUTTERFLY VALVES

Size Range	DN 50 – DN 600
Body Style	Wafer | Lug
Temperature Range	-20°F to 500°F (-29°C to 260°C)
Flange Accommodation	EN1092-1 PN10 | PN16 | PN25 | PN40
Pressure Rating	580 psig (40 bar)
Face-to-Face	EN 558-1 Series 20 | 25 | 16
Leakage Rate	EN 12266-1 (Leakage rate A)
Applications	Chemical Processing

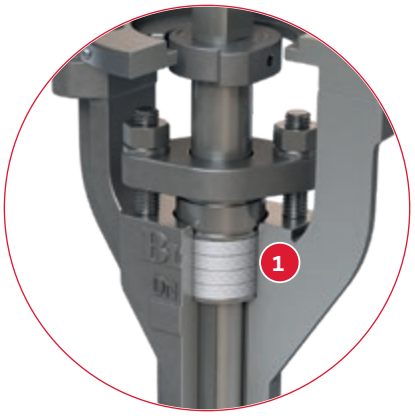


FUGITIVE EMISSIONS RATINGS

ISO 15848-1	Leakage Class	AH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure Class	PN16 | PN25 | PN40
TA Luft VDI 2440 Compliant		

KEY FEATURES

1. **Packing**
Chevron style packing provides a long service life and reliable low fugitive emissions performance.



2. **Enclosed Base**
Blind drilled hole eliminates a potential leak path for fugitive emissions.

AMRESIST
ACRIS PFA LINED BUTTERFLY VALVES

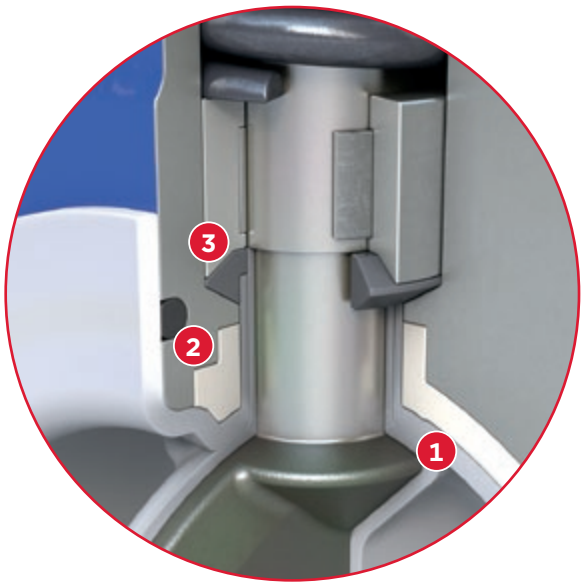
Size Range	1″ to 24″ (25 to 600mm)
Pressure Rating	150 psig (10 bar)
Temp. Range	-20°F to 320°F (-29°C to 160°C)
VacuumRatings	To 0.0002 psia (1.03 x 10-2 torr)
Body Style	Two-piece | Wafer | Lug
Face-to-face	ISO 5752 | API 609
Top Plate	ISO 5211
Drilling	ASME B16.5 CL150 | ASME B16.1 CL125
Body Material	Ductile Iron
Shaft/Disc	17-4SS over molded with PFA (1″ to 12″) 17-4SS shafts/high strength steel disc over molded with PFA (14″ to 24″) Carbon Steel over molded with PFA (1″ to 12″) Titanium grade 7 (3″ to 12″)
Liner	PFA
Back-up Liner	Silicone | FKM
Body Bolts	18-8 Stainless Steel

FUGITIVE EMISSIONS RATINGS

ISO 15848-1	Leakage Class	CM
	Endurance Class	C03
	Temperature	300°F (149°C)
	Pressure	150 psig (10 bar)

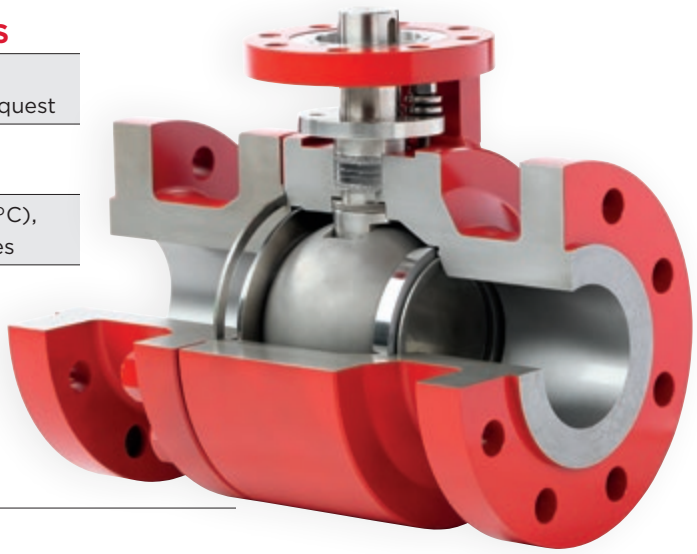
KEY FEATURES

1. **PFA Liner**
   The spherically shaped flexible PFA liner hub perfectly matches the PFA over molded, spherically machined disc hub.
2. **Back Up Liner**
   The elastomer back up liner compresses the PFA liner extension around the over molded shaft.
3. **Packing**
   The spring energized PTFE graphite safety packing seals against the exit point of the PFA liner extension and the PFA over molded shaft. The spring compensates for packing wear and thermal cycles.



FLOW-TEK SERIES M1
SEVERE SERVICE METAL SEATED BALL VALVES

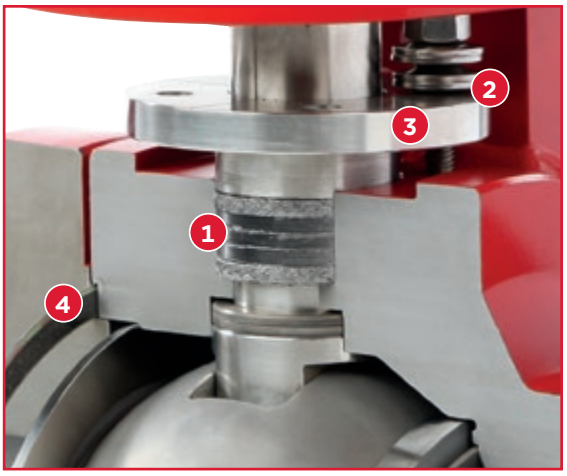
Size Range	1/2″ - 36″ (DN 15 - 900) Custom and larger sizes available upon request
Pressure Rating	ASME 150 - 4500 Custom higher pressures upon request
Temperature Range	Standard design rated up to 1100°F (593°C), can be customized for higher temperatures
Port	Full | Standard
Body Style	2 piece | 3 piece
End Connections	Raised Face Flange (ASME B16.5 and EN 1092-1) Ring Type Joint (ASME B16.5) Butt Weld (ASME B16.25) Socket Weld



FUGITIVE EMISSIONS RATINGS

M1 SEVERE SERVICE METAL SEATED BALL VALVES		**PACKING MATERIAL GRAPHITE**
API 641	Valve Group	A
	Pressure at 500°F (260°C)	600 psig (41 bar)
	Pressure at Ambient Temp.	600 psig (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure	ASME Class 150/300/600

KEY FEATURES



1. **Packing**
   Multiple rings provide a large sealing area. Several die formed graphite rings provide tight sealing once compressed. Exterior braided graphite rings encapsulate the die formed rings. The braided rings provide strength and prevent extrusion/damage to interior die formed rings.
2. **Belleville Springs**
   Provide live loading to the packing. Provides continuous self-adjusting force down onto packing to create seal. Compressed springs provide consistent force as packing settles and valve components thermally expand.
3. **Packing Gland Flange**
   The circular shape and four evenly spaced bolts apply uniform compression of packing and prevent any leak paths through lower-compressed sections of the packing. Contoured underside more uniformly distributes load downward onto packing to create seal. Uniform loading is important to ensure no area of packing sees sub-optimal compressive forces.
4. **Body Joint**
   Up to pressure CL 1500, spiral wound gaskets are used. CL 2500 and above, a proprietary pressure energized metal seal rings is used. The metal seal ring can easily withstand the higher media pressures and forces.

FLOW-TEK
MEDIA CONTAINMENT UNIT (MCU)

Size Range	1/4" - 10" (8 mm - 250 mm)
Valve Compatibility	Triad | 7000/8000 | S7500/S7700 F15/F30 | RF15/RF30 | S85
Body Materials	A351 Gr CF8M
Stem Materials	SS316
Packing Materials	TFM
Applications	Emission Control | High Cycle Service Low-High Service Temperature Additional Stem Sealant Device Stem Seal Monitoring | Stem Extension

KEY FEATURES

1. **Tight Sealing**
Flow-Tek's MCU features live-loaded stem sealing with Belleville springs that automatically compensate for temperature and pressure fluctuations, maintaining a leak-tight seal for extended cycle life. Multiple TFM V-ring stem packing provides the rigid secondary stem seal. A TFM gasket seals against possible leaks between the unit and valve.

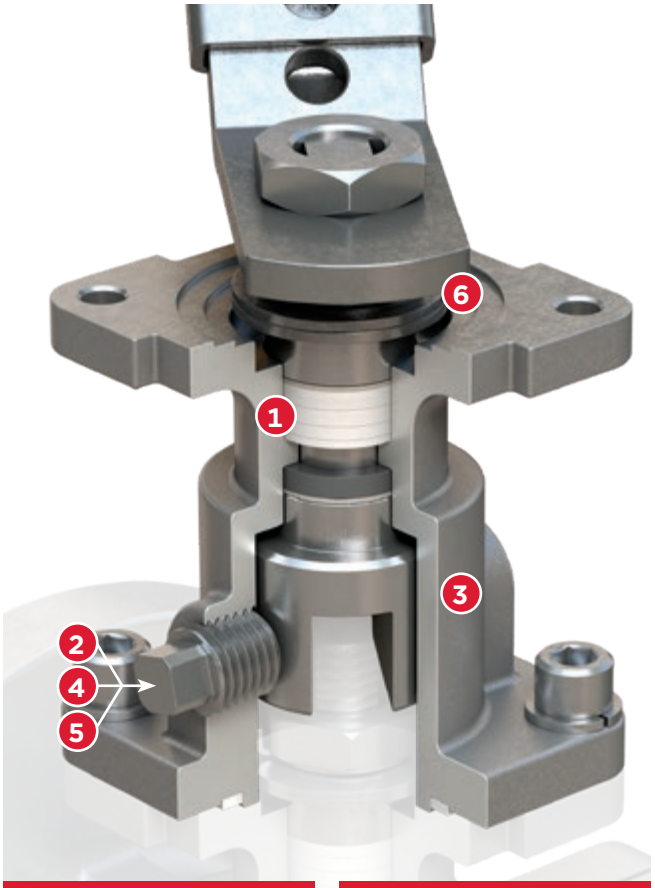
2. **Leak Detection**
A strategically placed monitoring connection allows the customer/operator to use a pressure gauge or sniffer sensor for early detection of primary stem seal leaks.

3. **Extended Temperature Range**
The additional height of the MCU elevates the packing further away from the valve's service media and potential temperature extremes. This allows for tight sealing in both high and low temperature applications.

4. **Sealant Injection**
The MCU can be adapted with a button head check valve to inject sealant for a third seal or for emergency shut-off. An optional second port allows for a combination of monitors, check valve injection or pressure displacement line.

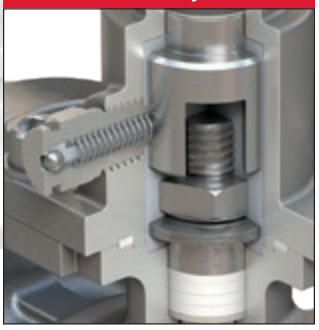
5. **Positive Pressure Seal**
A positive pressure seal can be accomplished by permanently connecting a pneumatic line to the unit to provide a positive pressure supply that barely exceeds the valve line operating pressure. This protects against possible valve stem leaks to the atmosphere.

6. **Mounting Ease**
The housing top pad and stem slot meet Flow-Tek's Secure Mount standards for easy installation of handles or actuators. Installation and maintenance procedures (such as monitoring) can be performed while valve is under full pressure.



2 - Leak Detection

4 - Sealant Injection



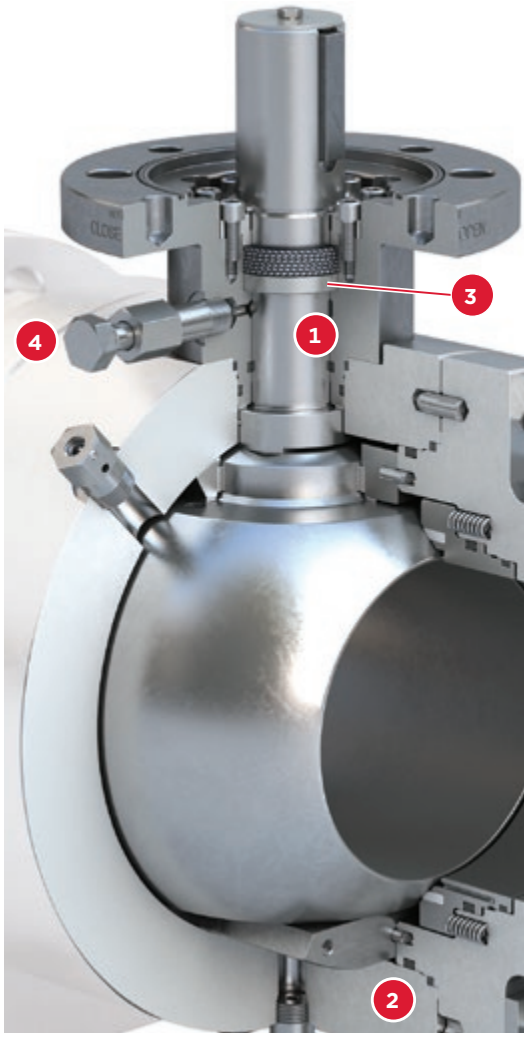
FLOW-TEK TRUNNION MOUNTED BALL VALVES

Size Range*	2″ - 24″ (50mm - 600mm)
Pressure Rating*	ASME Class 150 | 300 | 600
Temperature Range	-50 to 600°F (-45 to 315°C)
Port	Full
Body Style	2 piece, 3 piece
End Connections	Flanged | Butt Weld
Body Material*	ASTM A105 | ASTM A350 Gr. LF2 ASTM A182 Gr F316
Seat Material*	RPTFE Nylon Devlon® PEEK Tek-Fil® TFM

*Additional sizes, pressure classes, and materials available upon request

FUGITIVE EMISSIONS RATINGS

TRUNNION MOUNTED BALL VALVES		PACKING MATERIAL GRAPHITE
ISO 15848-1	Leakage Class	BH
	Endurance Class	C02
	Temperature	392°F (200°C)
	Pressure	ASME Class 150/300/600



KEY FEATURES

1. **Double Seal on Stem**
Primary o-ring stem seal prevents stem leakage in standard operating conditions. Secondary graphite packing ensures proper stem sealing per API 607 in extreme temperature scenarios.

2. **Double Seals on Body Joints**
Primary elastomeric seals ensure zero leakage in standard operating conditions. Secondary graphite seals ensure proper body joint sealing per API 607 in extreme temperature scenarios.

3. **Pressure Energized Stem Packing**
The proprietary energizer ring located above the primary o-ring stem seal provides insurance in the rare occasion the o-ring is damaged. The energizer ring would use the media pressure to create an upward compressive force on the packing. This upward force on the packing is combined with the downward compressive force created by tightening the packing gland. This results in a larger net compressive force on the packing and better seal than a typical packing design.

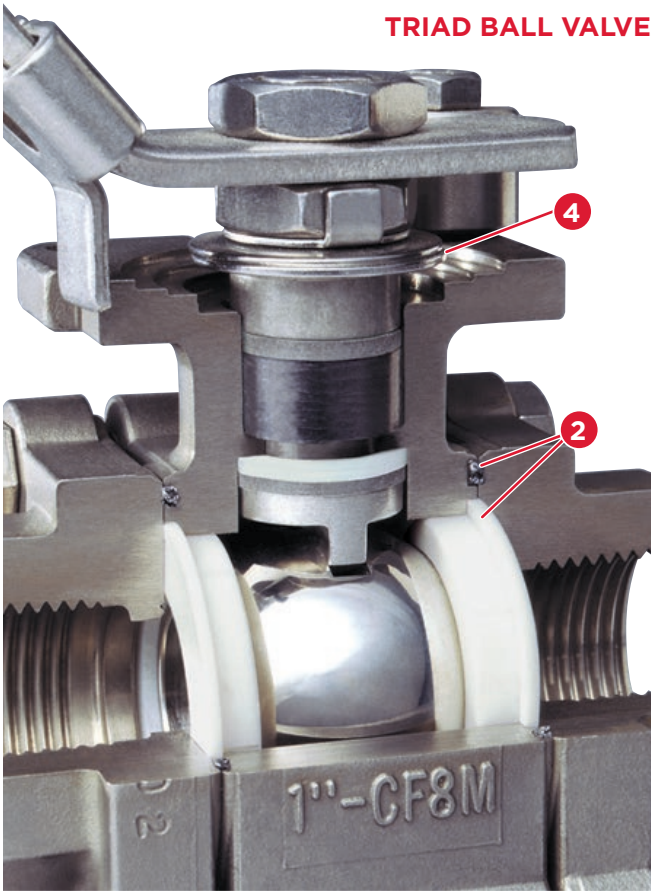
4. **Emergency Stem Sealant Injection**
This standard feature allows the valve's stem housing to be adapted with a grease fitting to inject sealant during emergency scenarios. By filling the cavity between the stem and stem housing, this secondary stem seal provides protection against unplanned spikes in operating conditions.

FLOW-TEK STANDARD BALL VALVES KEY FEATURES

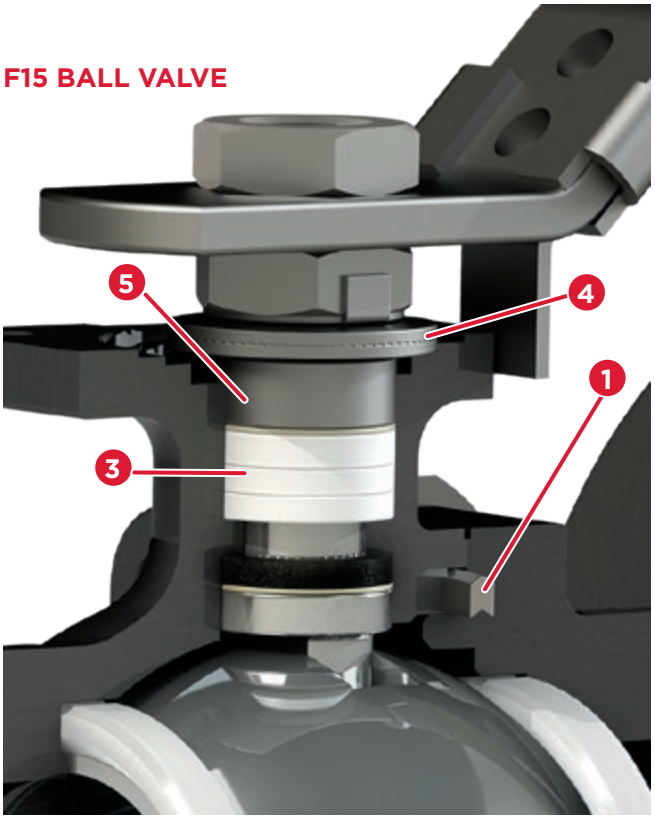
1. **Spiral Wound Body Gaskets**
   Chevron shape is compressed and provides outward force creating tight seal. Softer graphite filler which does the sealing is protected from damage by strong Stainless Steel end pieces.
2. **Dual Body Gaskets**
   Primary inner teflon gaskets seal against media leakage under typical operating conditions. Secondary outer graphite gasket seals in fire scenarios.
3. **Multi-piece Chevron Packing**
   3 pieces provide a large sealing area. Chevron shape causes outward sealing expansion when packing is compressed. Harder packing protector prevents damage and extrusion of the packing.
4. **Live Loaded Packing**
   Standard on sizes 2" & smaller; optional on larger sizes. Belleville springs provide continuous self-adjusting force down onto packing to create seal. Compressed springs provide consistent force as packing settles and valve components thermally expand.
5. **Packing Gland**
   Contoured underside more uniformly distributes load downward onto packing to create seal. Uniform loading is important to ensure no area of packing sees sub-optimal compressive forces.

Product Line	F15/ F30	RF15/ RF30	Triad	7000/ 8000	S85
Spiral Wound Body Gaskets	✓	✓			
Dual Body Gaskets			✓		
PTFE Body Gasket				✓	✓
Packing	✓	✓	✓	✓	✓
Belleville Springs	✓	✓	✓	✓	✓
Packing Gland	✓	✓	✓	✓	✓

TRIAD BALL VALVE



F15 BALL VALVE



Flow-Tek Ball Valves - Fugitive Emissions ratings

The ball valves below are qualified to the listed fugitive emissions standards up to their maximum valve ratings.

FLOW-TEK F15/F30 BALL VALVES

Size Range	1/2" - 12" (12mm - 300mm)
Pressure Ratings*	F15: ASME Class 150 F30: ASME Class 300
Temperature Ratings	-50°F to 650°F (-46°C to 343°C)
Port	Full Port
Body Style	Two Piece
End Connections*	F15: ASME Class 150 F30: ASME Class 300
Body Materials	Stainless Steel | Carbon Steel | Alloys
Seat Materials	Standard: TFM 1600 Optional: Tek-Fil® | PEEK | RPTFE UHMWPE | Metal

* EN version of this valve available.

FUGITIVE EMISSIONS RATINGS

FLOW-TEK F15/F30 BALL VALVES		**PACKING MATERIAL - TFM**
API 641	Valve Group	B
	Pressure at 500°F (260°C)	100 psi (7 bar)
	Pressure at Ambient Temperature	600 psi (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure	ASME Class 150/300
TA Luft VDI 2440 Compliant		

Note: Additional Fugitive Emissions qualified packing materials are available upon request.

FLOW-TEK RF15/RF30 BALL VALVES

Size Range	1" - 12" (25 mm - 300mm)
Pressure Ratings	RF15: Flanged ASME Class 150 RF30: Flanged ASME Class 300
Temperature Ratings	-50°F to 650°F (-46°C to 343°C)
Port	Standard Port
Body Style	One Piece
End Connections	RF15: Flanged ASME Class 150 RF30: Flanged ASME Class 300
Body Materials	Stainless Steel | Carbon Steel | Alloys
Seat Materials	Standard: TFM 1600 Optional: Tek-Fil® | PEEK | UHMWPE | RPTFE

FUGITIVE EMISSIONS RATINGS

FLOW-TEK RF15/RF30 BALL VALVES		**PACKING MATERIAL - TFM**
API 641	Valve Group	B
	Pressure at 500°F (260°C)	100 psi (7 bar)
	Pressure at Ambient Temperature	600 psi (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure	ASME Class 150/300
TA Luft VDI 2440 Compliant		

Note: Additional Fugitive Emissions qualified packing materials are available upon request.

FLOW-TEK 7000/8000 BALL VALVES

Size Range	1/4″ - 12″ (8mm - 300mm)
Pressure Ratings	1/4″ - 4″: 1000 psi CWP (69 Bar) 6″ - 12″: 400 psi CWP (27 Bar)
Temperature Ratings	-50°F to 550°F (-46°C to 287°C)
Port	Full Port
Body Style	Three Piece
End Connections	Threaded | Socket Weld | Butt Weld | Flanged Extended Socket Weld | Extended Butt Weld
Body Materials	Stainless Steel (7000) | Carbon Steel (8000)
Seat Materials	Standard: RPTFE Optional: TFM 1600 | Tek-Fil® | UHMWPE

FUGITIVE EMISSIONS RATINGS

FLOW-TEK 7000/8000 BALL VALVES		**PACKING MATERIAL - TFM**
API 641	Valve Group	B
	Pressure at 500°F (260°C)	100 psi (7 bar)
	Pressure at Ambient Temperature	600 psi (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure	1000 psi (69 bar)
TA Luft VDI 2440 Compliant		

Note: Additional Fugitive Emissions qualified packing materials are available upon request.

FLOW-TEK S85 BALL VALVES

Size Range	1/2″ - 3″ (15mm - 80mm)
Pressure Rating	1000 psi (69 Bar)
Temp. Ratings	-50°F to 450°F (-46°C to 232°C)
Port	Full Port
Body Style	Two Piece
End Connections	Threaded - NPT
Body Materials	Stainless Steel
Seat Materials	RPTFE

FUGITIVE EMISSIONS RATINGS

FLOW-TEK SERIES 85 BALL VALVES		**PACKING MATERIAL - TFM**
API 641	Valve Group	B
	Pressure at 500°F (260°C)	100 psi (7 bar)
	Pressure at Ambient Temperature	600 psi (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure	1000 psi (69 bar)

Note: Additional Fugitive Emissions qualified packing materials are available upon request.

FLOW-TEK TRIAD BALL VALVES

Size Range	1/4" - 4" (8mm - 100mm)
Pressure Ratings	2200 psi CWP (151 Bar)
Temperature Ratings	-50°F to 550°F (-46°C to 287°C)
Port	Full and Standard
Body Style	Three Piece
End Connections	Threaded | Socket Weld | Butt Weld | Flanged CL600 Extended Socket Weld | Extended Butt Weld
Body Materials	Stainless Steel | Carbon Steel | Special Alloys
Seat Materials	Standard: TFM 1600 Optional: Tek-Fil® | PEEK | UHMWPE RPTFE | Metal

FUGITIVE EMISSIONS RATINGS

FLOW-TEK TRIAD BALL VALVES		PACKING MATERIAL - TFM
API 641	Valve Group	B
	Pressure at 500°F (260°C)	100 psi (7 bar)
	Pressure at Ambient Temperature	600 psi (41 bar)
ISO 15848-1	Leakage Class	BH
	Endurance Class	C03
	Temperature	392°F (200°C)
	Pressure	2200 psi (152 bar)

Note: Additional Fugitive Emissions qualified packing materials are available upon request.

SERIES 70 ELECTRIC ACTUATOR

Low profile, compact, high output actuator for quarter turn applications

- On/Off or modulating (Servo NXT)
- Manual declutchable handwheel
- High visibility dome position indicator
- Network protocols available

Torque	300 to 18,000 lb-ins (34 to 2030 Nm)
Voltage	VAC: 24, 120, 220, | VDC: 12, 24
Standard Enclosure	NEMA Type 4, 4X
Explosion Proof	NEMA Type 4, 4X, 7, 9 Class I, Div 1 & 2, Group C, D Class II, Div 1 & 2, Group E, F, and G

SERIES 98 SCOTCH YOKE PNEUMATIC ACTUATOR

Torque	Double Acting up to:	885,000 lb-in (100,000 Nm)
	Spring Return up to: (Spring End)	445,261 lb-in (50,306 Nm)
Pressure Range	40 - 150 psi (2.8 - 10.3 bar)	
Media	Dry Compressed Air/Inert Gas*	
Temp. Range	Standard	-4°F to 200°F (-20°C to 93°C)
	High Temperature	Up to 300°F (149°C)
	Low Temperature	Down to -50°F (-46°C)

Bray scotch yoke actuator for quarter turn rotary operation

- Compact design with a high torque to weight ratio
- Modular design offers easy configuration in the field
- Optional modular components: manual overrides, hydraulic dampener for fast acting operation, lockout/pst device
- Premium epoxy/polyurethane coating as standard
- Pressure Equipment Directive (PED) 97/23/EC compliant
- Standardized interfaces: ISO 5211, VDI/VDE 3845 for accessories
- Optional high integrity nylon coating for harsh environments
- SIL 3 capable

Extreme High Temperature Actuator

Stainless Steel Actuator

SERIES 92/93 PNEUMATIC ACTUATOR

Bray rack and pinion actuators available in double acting and spring return

- Standard units have anodized aluminum bodies with polyester coated end caps
- Optional high integrity nylon coating for harsh environments
- Integral porting
- Internal bidirectional travel stops
- SIL 3 capable

Torque	Double Acting up to: 44,130 lb-in (4,986 Nm) Spring End Torque up to: 14,173 lb-in (1,601 Nm)	
Pressure Range	40 - 140 psi (2.8 - 10 bar)	
Media	Dry Compressed Air/Inert Gas*	
Temperature Range	Standard	-4°F to 200°F (-20°C to 93°C)
	Low	-40°F to 176°F (-40°C to 80°C)
	High	0°F to 300°F (-18°C to 149°C)
	Extreme High	0°F to 482°F (-18°C to 250°C)

*Contact factory for other media or non-standard temperature range.

SERIES 6A ELECTRO-PNEUMATIC POSITIONER

- Precision digital control
- Zero bleed design
- Compatible with rotary or linear actuators for single and double acting applications
- Various housing options available
- Precise, microprocessor driven flow control and advanced communication
- Non-contacting position sensor technology
- Integral volume booster
- Connective and preventative maintenance self-diagnostic checks

SERIES 6P P/P POSITIONER

- Pneumatic to pneumatic positioner for single and double acting actuators
- Rugged aluminum diecast housing for harsh environments
- Minimal setup time for zero and span adjustment
- Split range capabilities
- High visibility dome position indicator
- Optional 2 x SPDT mechanical switches

SERIES 5A, 5B AND 5C VALVE STATUS MONITORS

- Discrete status monitor for quarter turn rotary actuators
- Nema 4, 4x and IP66, IP67 and IP68 ingress protection
- Available in Aluminum and Resin body configurations
- Intrinsically safe or explosion-proof options for hazardous locations
- High visibility dome position indicator
- Up to 6 SPDT switches or non-contacting proximity switches
- Switches pre-wired to internal terminal block

SERIES 54 VALVE PROXIMITY SENSOR

- > Dual proximity sensors for valve position
- > IP66, IP67, IP69K ingress protection available
- > Available solenoid outputs
- > 2 or 3 wire DC, AC/DC, intrinsically safe, and AS-i interface
- > Pin connector or conduit versions available

SERIES 63 HIGH FLOW SOLENOID VALVES

- > Weatherproof NEMA 4, 4X and explosion proof housings available
- > Flying leads or DIN connectors
- > Single or dual coil
- > 5/2 or 3/2 Operation
- > NAMUR mounted
- > High flow up to 1.4 Cv
- > Intrinsically safe versions available

SINCE 1986, BRAY HAS PROVIDED FLOW CONTROL SOLUTIONS FOR A VARIETY OF INDUSTRIES AROUND THE WORLD.

VISIT **BRAY.COM** TO LEARN MORE ABOUT BRAY PRODUCTS AND LOCATIONS NEAR YOU.

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