

## SUPERIOR CONTROL

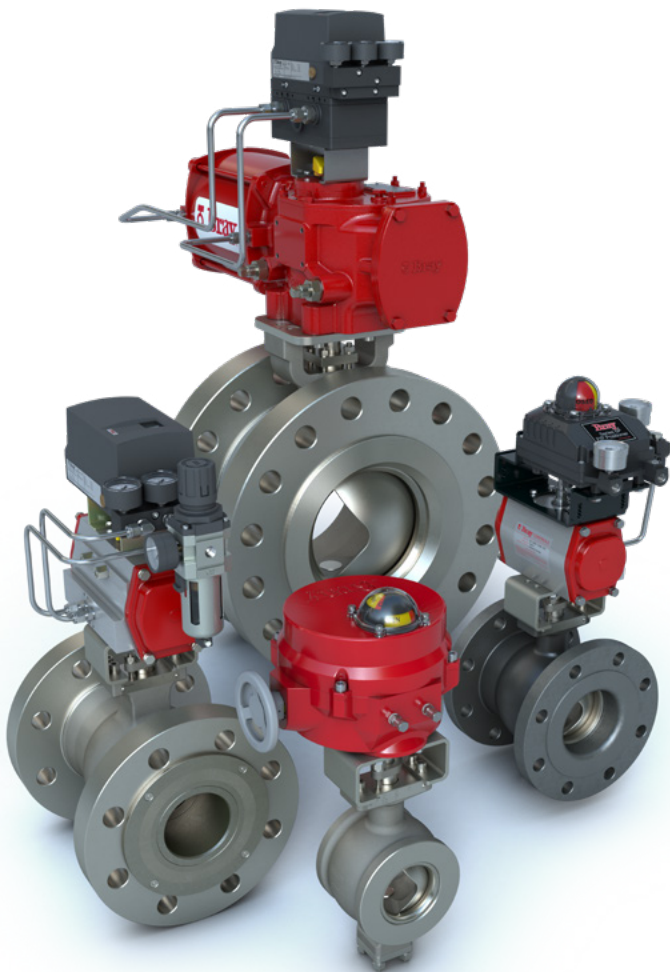
Bray segmented ball valves are designed for modulating control and on-off services in gas, liquid, and slurry applications. The Bray Series 19 and Series 19L segmented ball valves deliver exceptional performance with the precision, features, and options for superior control in a wide variety of industries and applications.

### INDUSTRIES

- > Chemical
- > Food & Beverage
- > HVAC
- > Mining
- > Oil & Gas
- > Power
- > Pulp & Paper
- > Refining
- > Sugar & Ethanol Production

### APPLICATIONS

- > Liquid, Gas & Steam Services
- > Pressure/Temperature/Level Control
- > Slurry & Abrasive Services

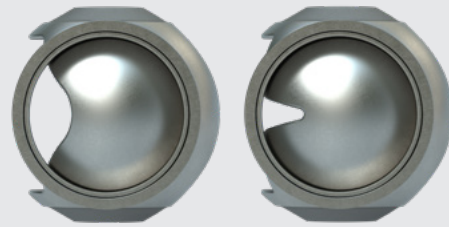


## VERSATILE 3-IN-1 VALVE PERFORMANCE

Bray segmented ball valves combine the preferred characteristics of a knife gate valve, a globe valve, and a ball valve to provide versatility and performance in a single package.

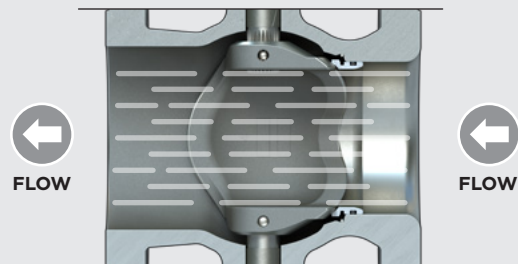
### CUSTOMIZABLE CONTROL

Trailing edge of segment offers customizable V-profile for precise control, comparable to **globe valve** performance.



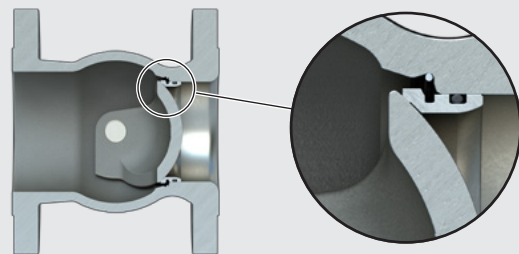
### UNINTERRUPTED FLOW

Split-stem design offers an uninterrupted flow path, comparable to **ball valve** performance.



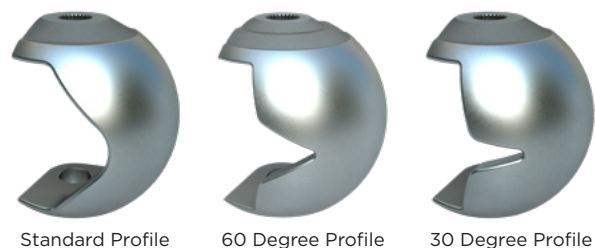
### VISCOUS MEDIA HANDLING

Sharp leading edge of segment is designed to cut through viscous media, comparable to **knife gate valve** performance.



### CUSTOM CHARACTERIZATION

With 300:1 rangeability, three standard port options, and **available customized characterization**, the S19 segmented ball valve can be designed for optimal flow performance.



Standard Profile

60 Degree Profile

30 Degree Profile

### SPECIFICATIONS

<b>Size Range</b>	NPS 1 to 16   DN 25 to 400
<b>Pressure Ratings</b>	ASME Class 150, 300, 600   PN 10, 16, 25, 40
<b>Temperature Range</b>	-50°F to 500°F   -46°C to 260°C
<b>Body Style</b>	1-piece
<b>End Connections</b>	Flanged Flangeless <sup>1</sup>
<b>Port</b>	Standard, 60°, 30°   Custom on request
<b>Flow Characteristics</b>	Equal Percentage
<b>Rangeability</b>	300:1

**NOTES**

1 Available only on S19 model.

### DESIGN STANDARDS

<b>Valve Design</b>	ASME B16.34
<b>Leakage Classification</b>	<b>Resilient Seat<sup>1,2</sup>:</b> Class VI per ANSI/FCI 70-2   IEC 60534-4 <b>Metal Seat:</b> Class IV per ANSI/FCI 70-2   IEC 60534-4
<b>Face-to-Face</b>	Flanged Flangeless <sup>1</sup>
	ISA 75.08.02 ASME B16.10 Bray Internal Standard
<b>Flange Drilling</b>	ASME B16.5 EN 1092-1
<b>Top Flange</b>	ISO 5211

**NOTES**

1 Available only on S19 model.  
2 Recommended only for clean liquid or gas applications.

### MATERIAL OPTIONS<sup>1</sup>

<b>Body</b>	ASTM A216 WCB ASTM A351 CF3M (316L Stainless Steel) ASTM A351 CF8M (316 Stainless Steel) ASTM A351 CG8M (317 Stainless Steel) ASTM A352 LCB ASTM A352 LCC Hard coating options for internal bore
<b>Segmented Ball</b>	ASTM A351 CF8M A351 CF8M with hard chrome plating A351 CF8M with specialized hard coating options

<b>Seat</b>	Tek-Fil <sup>®</sup> A351 CF8M with Stellite <sup>®</sup> 6 A351 CF8M with Chrome Carbide Solid Tungsten Carbide
<b>Stem</b>	17-4 PH Stainless Steel ASTM A479 Gr. XM-19 (Nitronic 50 <sup>®</sup> ) Stainless Steel ASTM A479 Gr. SMO 254 Stainless Steel ASTM A479 UNS 32760 Super Duplex
<b>Packing</b>	PTFE Graphite

**NOTES**

1 Other materials available on request. Contact Bray for more information.

### CERTIFICATIONS & APPROVALS<sup>1</sup>

<b>Certifications</b>	ATEX   CRN   PED   TSG   TR CU   UA.TR.089
<b>Fugitive Emissions</b>	ISO 15848

**NOTES**

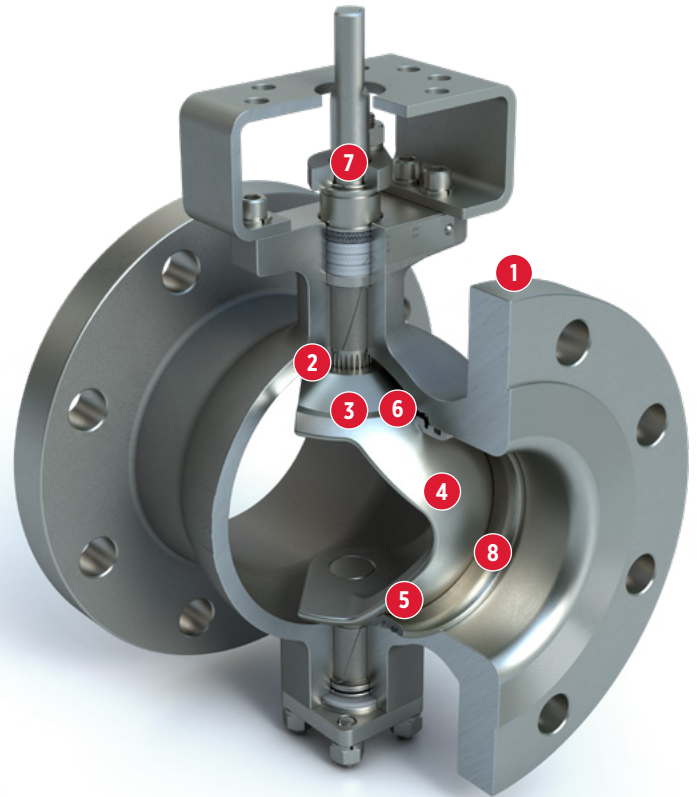
1 A complete listing of certifications and approvals can be found at BRAY.COM

**STANDARD SERVICE | SERIES 19**

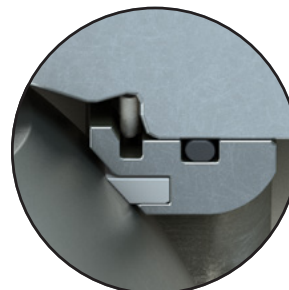
The perfect control valve solution for slurries containing suspended solids or fibers, viscous fluids, pulp, paper, chemical, wastewater sludge, and other challenging service conditions.

**DESIGN FEATURES**

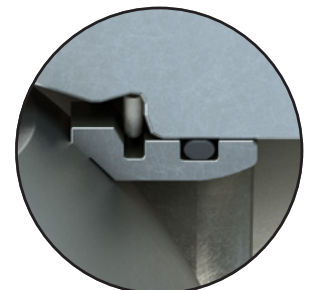
- 1 ONE-PIECE BODY:** Provides a rigid, robust shell capable of withstanding pipe loading, and eliminates potential leak paths.
- 2 SPLINED STEM TO SEGMENT CONNECTION:** Provides efficient torque transmission and precise control, with low hysteresis and reduced deadband.
- 3 SELF-CENTERING BALL SEGMENT:** Perfectly oriented, specially designed shaft pin facilitates self-alignment of the ball segment, while simplifying assembly and disassembly during routine maintenance.
- 4 COATINGS:** High-performance coatings on internal components ensure long life and corrosion resistance.
- 5 ENERGIZED SEAT:** Seat spring provides constant force on the seat to seal against the segment at low differential pressures. At higher differential pressures, optimized sealing diameters ensure lower seat torques.
- 6 PROTECTED SEALING AREA:** Seats are designed to direct media flow away from the sealing area.
- 7 BLOWOUT PROOF STEM:** Retaining ring fits between machined stem groove and gland retainer step.
- 8 EASY MAINTENANCE:** The seat is replaceable without removing the segment and shaft.



**INTERCHANGEABLE SEAT DESIGN**



**RESILIENT SEAT**  
General Purpose  
Moderate Temperatures  
Light Solids



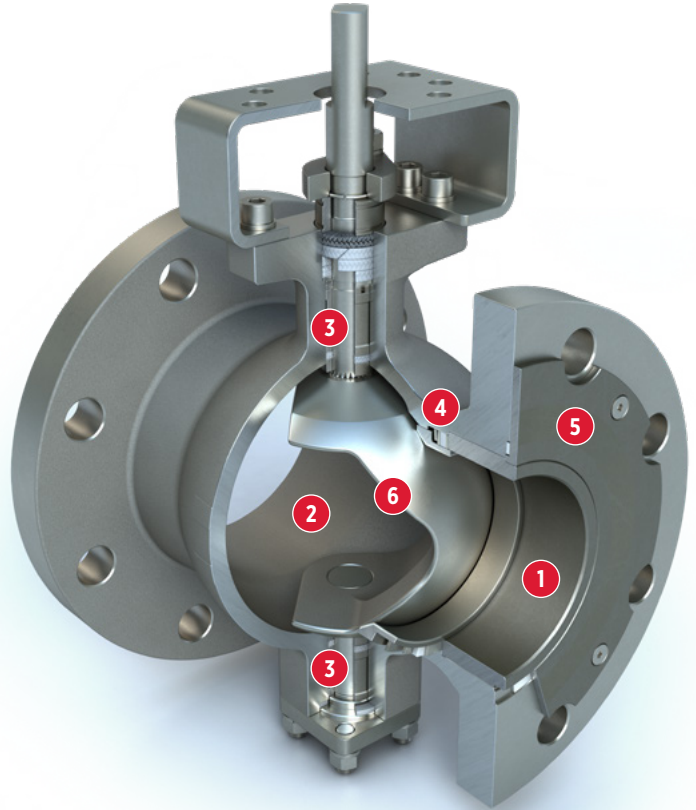
**METAL SEAT**  
Industrial Processes  
Moderate Temperatures  
Moderate Solids

**SEVERE SERVICE | SERIES 19L**

Severe erosion demands more from your control valve. In addition to the benefits of the standard service valve, the S19L offers advanced material selections and multiple trim options to provide an application-specific solution for your unique needs.

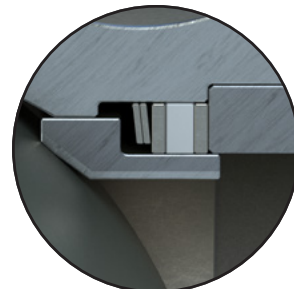
**DESIGN FEATURES**

- 1 EROSION RESISTANT DOWNSTREAM LINERS/SEATS:** Reverse flow direction prevents body wall erosion due to high velocities at low openings.
- 2 SEVERE SERVICE COATINGS:** Customized ultra-hard coatings provide application-specific corrosion and erosion resistance for valve internals.
- 3 BEARING SEALS:** Protects metal bearings from ingress of media.
- 4 PRESSURE BALANCED SEAT DESIGN:** Seats capable of sealing under full differential pressures with low torques and smooth operation.
- 5 EASY MAINTENANCE:** Flanged retainer provides easy external access for seat and liner replacement. Seat is replaceable without removing the segment and shaft.
- 6 TRIM OPTIONS:** Multiple options available for optimized performance in various levels of erosive services. (See table below.)



TRIM	Downstream Erosion (Normal)	Downstream Erosion (Severe)	Segment Erosion (Severe)
Level I	■	—	—
Level II	■	■	—
Level III	■	■	■

**PRESSURE BALANCED SEAT DESIGN**



**SEVERE SERVICE METAL SEAT**

Industrial Processes  
Moderate Temperatures  
Severe Abrasives