

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.



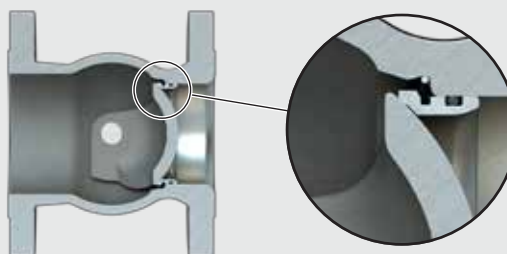
UNINTERRUPTED FLOW

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



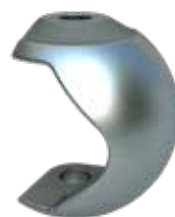
VISCOUS MEDIA HANDLING

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

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

NOTES

1 Available only on S19 model.

DESIGN STANDARDS

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

NOTES

1 Available only on S19 model.

2 Recommended only for clean liquid or gas applications.

MATERIAL OPTIONS¹

Body	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
Segmented Ball	ASTM A351 CF8M A351 CF8M with hard chrome plating A351 CF8M with specialized hard coating options

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

NOTES

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

CERTIFICATIONS & APPROVALS¹

Certifications	ATEX CRN PED TSG TR CU UA.TR.089 PE(S)R UKCA S.I. 2016:1105
Fugitive Emissions	ISO 15848

NOTES

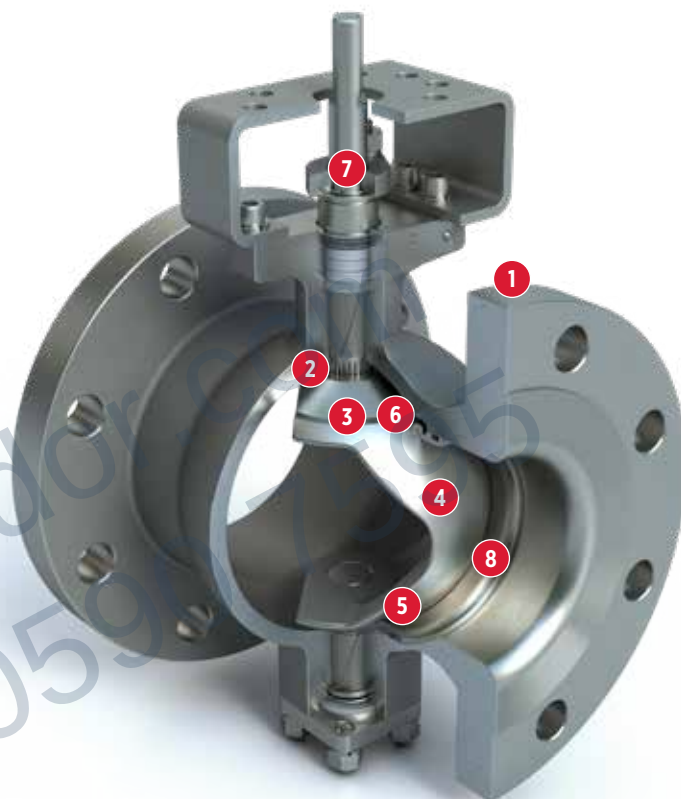
1 A complete listing of certifications and approvals can be found at BRAY.COM

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

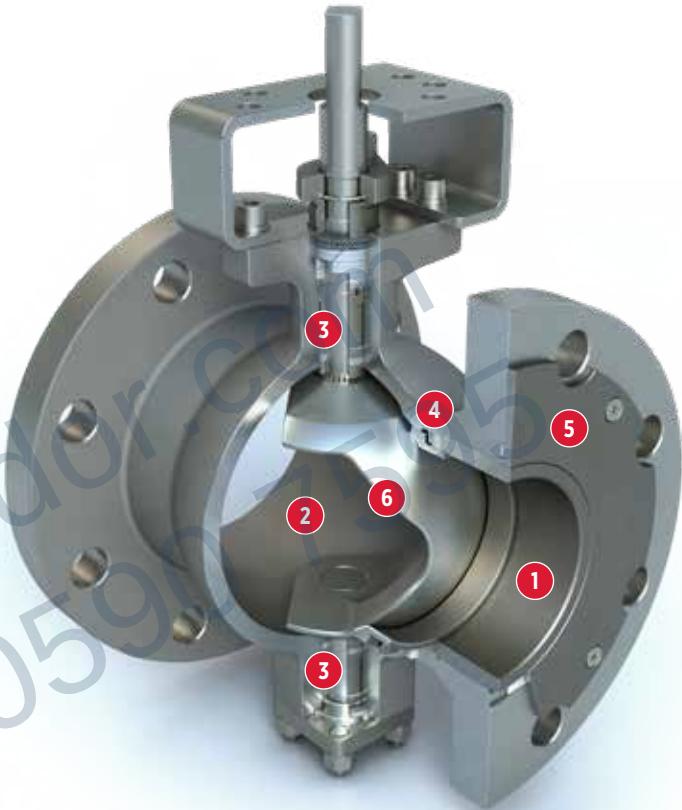
Industrial Processes
Moderate Temperatures
Moderate Solids

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