
BRAY **BALL VALVE OVERVIEW**



 **Bray**[®]

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THE HIGH PERFORMANCE COMPANY

3 PIECE BALL VALVES



TRIAD SERIES

Full Port	NPS ¼ - 4 DN8 - 100	- Firesafe – API 607 - Designed in accordance with ASME B16.34 - ISO 5211 Secure Mount actuator top flange - PE(S)R UKCA S.I. 2016:1105
Standard Port	NPS ¾ - 2½ DN20 - 65	
Materials	Stainless Steel & Carbon Steel	
Pressure Ratings	Full Port: 2200 psi (151.6 bar)WOG Standard Port: 2200 psi (151.6 bar)WOG FP & SP: up to 425 psi (29.3 bar)WSP	

Features include live loaded stem seals through NPS 2 (DN50), a redundant body seal design, anti-static protection and locking safety handles. Hex head cap screws join end connections to the tapped center section. Special body and trim materials available.



SERIES 7000/8000

Full Port	NPS ¼ - 12 DN8 - 300	- ISO 5211 Secure Mount actuator top flange - NSF/ANSI/CAN 61 & 372 certification available for S7000, NPS ¼ - 4 (DN8-100) - PE(S)R UKCA S.I. 2016:1105
Materials	7000 Stainless Steel 8000 Carbon Steel	
Pressure Ratings	NPS ¼ - 4 (DN8 - 100): 1000 psi (69 bar) WOG NPS 6 - 12 (DN150 - 300): 400 psi (27.6 bar)WOG	

Features include live loaded stem seals through NPS 2½ (DN650), anti-static protection and locking safety handles. These valves are also available with cavity filler seats for special service requirements. Special body and trim materials available.



SERIES DM7000/DM8000 DIRECT MOUNT

Full Port	NPS ½ - 2 DN15 - 50	- Design meets MSS-SP-110 - All valves are factory tested to MSS SP-72 and API 598 - PE(S)R UKCA S.I. 2016:1105
Materials	DM7000 Stainless Steel DM8000 Carbon Steel	
Pressure Ratings	1000 psi (69 bar) WOG	

Design is based on the series 7000/8000 with extensive interchangeability of the majority of the parts between the two series



SERIES S7500/S7700 MICRO PURE

Tube Bore Port	NPS ¼ - 2 DN8 - 50	- Comply with ASME BPE - USP Class VI Soft Goods - ISO 5211 (NPS ½ - 2) (DN15 - 50) Secure Mount actuator top flange
Valve Sizes	NPS ½ - 4 DN15 - 100	
Materials	Stainless Steel	
Pressure Ratings	NPS ¼ - 4 (DN8 - 100): 1000 psi (69 bar) 200 psi (13.8 bar) Clamped Ends WOG	

Specifically designed for high purity applications. The ball and end connections have the same I.D. as the tube piping system. Valves come standard with 20 RA maximum (SFV-1) surface finishes and all are solution cleaned and bagged. Features include live loaded stem seals through NPS 2½ (DN65) and locking safety handles



SERIES 5000/6000

Full Port	NPS ¼ - 4 DN8 - 100	ISO 5211 Secure Mount actuator top flange
Materials	5000 Stainless Steel 6000 Carbon Steel	
Pressure Ratings	NPS ¼ - 2 (DN8 - 50): 1000 psi (69 bar) WOG NPS 2½ - 4 (DN65 - 100): 800 psi (55 bar) WOG	

All the benefits of a 3 piece body design at an economical price. Features include a swing out center section for ease of installation and maintenance, adjustable stem packing, heavy duty internal entry stems and stainless steel safety locking handles.



3 PIECE - STANDARD END CONNECTIONS For custom end connections contact your Bray representative.

Product	Threaded	Butt Weld	Extended Weld	Socket Weld	Flanged	Weld Tube	Quick Clamp	Optional Cavity Fillers
Triad	•	•	•	•	•	–	–	•
7000 & 8000	•	•	•	•	•	–	–	•
S7500 & S7700	–	–	–	–	–	•	•	•
5000 & 6000	•	–	–	•	–	–	–	–





SERIES F15/F30

Body	2 Piece	- Firesafe – API 607 (Optional) - Designed in accordance with ASME B16.34 - Face to face ASME B16.10 long pattern - ISO 5211 Secure Mount actuator top flange - NSF/ANSI/CAN 61 & 372 certification available - PE(S)R UKCA S.I. 2016:1105
Full Port	NPS ½ - 12 DN15 - 300	
Materials	Stainless Steel & Carbon Steel	
Pressure Ratings	F15: ASME Class 150 F30: ASME Class 300	

Features include live loaded stem seals through NPS 2 (DN50), anti-static protection and locking safety handles. Larger sized valves feature trunnion-type ball support. Special body and trim materials available.



SERIES RF15/RF30

Body	1 Piece	- Firesafe – API 607 (Optional) - Designed in accordance with ASME B16.34 - Face to face ASME B16.10 short pattern - ISO 5211 Secure Mount actuator top flange - NSF/ANSI/CAN 61 & 372 certification available - PE(S)R UKCA S.I. 2016:1105
Standard Port	NPS 1 - 12 DN25 - 300	
Materials	Stainless Steel & Carbon Steel	
Pressure Ratings	RF15: ASME Class 150 RF30: ASME Class 300	

These end entry flanged valves feature live loaded stem seals through NPS 2 (DN50), anti-static protection and locking safety handles. Special body and trim materials available.



SERIES F15/F30 METAL SEATED

Full Port	NPS ½ - 6 DN15 - 150
Pressure Ratings	
Carbon Steel	Up to 505 psi @ 750°F 34.8 bar @ 399°C
Stainless Steel	Up to 425 psi @ 750°F 29.3 bar @ 399°C
Certification	PE(S)R UKCA S.I. 2016:1105

Available with a solid seat ring design. Using hardened metal seats and balls, the valves can be used in applications exceeding the limits of soft seated ball valves. Each valve is tested to meet or exceed FCI 70-2 Class V shutoff requirements as standard and class VI shutoff requirements as an option. These metal seated valves are ideal for abrasive and high temperature applications.



RESOLUTE BALL™ DESIGN FOR SERIES F15/F30, RF15/RF30

Body Style	Model	Pressure Class	Size - NPS	Size - DN
Flanged (full port)	F15	ASME Class 150 PN 10, PN 16	½ to 12	15 to 300
	F30	ASME Class 300 PN 25, PN 40		
Flanged (standard port)	RF15	ASME Class 150 PN 10, PN 16	1 to 12	25 to 300
	RF30	ASME Class 300 PN 25, PN 40		

Available Standards and Certifications

Valve Design	NACE MR0175 / ISO 15156
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Fugitive Emissions	API 641, ISO 15848-1, ISO 15848-2
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Features and Benefits	Direct Replacement Ball Design, Self Flushing/Cleaning, Reduced Seat-to-Ball Interface, Bidirectional Sealing, Multiple Seating Options
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Applications	Calcifying and Crystallizing Medias, Abrasive Slurries, Tank Drain and Isolation, Pump Isolation, White/Green/Black Liquor, Polymers/Monomers, Polyvinyl Chloride, Petrochemicals
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SERIES M1

Sizes	NPS ½ - 36 DN 15 - 900 Custom and larger sizes upon request
Pressure Ratings	ASME 150 - 4500, custom higher pressures upon request
Temperature	Standard design rated up to 1100 °F (593 °C), can be customized for higher temperatures
Design Standards	ASME B16.34 ASME Section VIII - Div 1, Appendix 2
End Connections	Raised Face and Ring Type Joint (ASME B16.5 and DIN 2501) Butt welds (ASME B16.25), Socket weld (ASME B16.11) Hubs & Custom Ends Available
End-To-End	ASME B16.10 (Long Pattern)
Certification	PE(S)R UKCA S.I. 2016:1105



SERIES M4

Size Range	NPS ½ - 2½ SW or BW DN 15 - 65 NPS 3 - 4 BW DN 80 - 100
Bore Sizes	0.63", 1.03", 1.56" 16mm, 26mm, 40mm
Pressure Ratings	ASME 1700, 3100, 4500 - NPS ½ - 2½ (DN15-65) Limited Class NPS 3 - 4 (DN80 - 100) Standard Class
Temperature	Up to 1100°F (593°C)
Design Standards	ASME B16.34, Bore sizes per ASME TDP-1
End Connections	SW per ASME B16.11, BW per ASME B16.25
Body Materials	A105, A182-F22 Cl.3, A182-F91
Ball Materials	410 SS/HVOF Chromium Carbide, Inconel® 718/Fused Chromium Carbide
Seat Materials	410 SS/HVOF Chromium Carbide, Inconel® 718/HVOF Chromium Carbide
Certification	PE(S)R UKCA S.I. 2016:1105



V-CONTROL CHARACTERIZED V-PORT BALLS

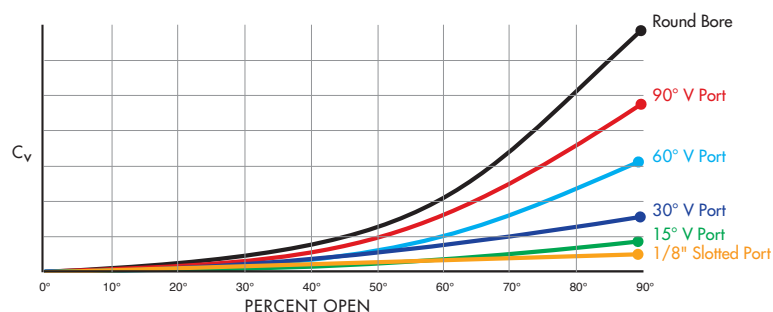
Valves Series	7000/8000	Triad	F15/F30	RF15/RF30
Sizes NPS	¼ - 12	½ - 4	½ - 12	1 - 12
DN	8 - 300	15 - 100	15 - 300	25 - 300

When combined with Bray's line of pneumatic and electric actuators and controls, the V-Control delivers exceptional performance.

With characterized V-ports, slotted ports or custom ports, V-Control ball valves provide accurate flow control. Available in 3-Piece and flanged bodies, V-Control valves offer superior rangeability, repeatability and high flow capacity. These quarter turn valves are easily automated and make an ideal control element in process piping systems.



Characterized Control





SERIES 1B TRUNNION

Body	2 Piece Cast or 3 Piece Forged
Full & Standard Port	NPS 2 - 24 DN50 - 600
Materials	Stainless Steel & Carbon Steel
Pressure Ratings	ASME Class 150, 300, 600, 900, 1500

- Firesafe – API 607
- Designed in accordance with API 6D

Trunnion Series valves are ideal for heavy duty applications such as oil and gas production, power and waste water industries. Standard design features include double block & bleed, stem & seat grease fittings, body cavity drain, vent ports and self relieving spring energized seats. Special body and trim materials available.



SERIES 19 SEGMENTED

1 Piece Body	NPS 1 - 16 DN25 - 400
Materials	Stainless Steel & Carbon Steel
ASME Class	150, 300 & 600
Certification	PE(S)R UKCA S.I. 2016:1105



A versatile Segmented Ball Valve designed for throttling or on-off applications in various industries including pulp & paper, chemical, power, oil & gas, and mining.

The valve features a characterized ball segment for high rangeability with splined stem connection for precise control, maintenance friendly segment-stem assembly, low friction shaft and thrust bearings for longer life, integral actuator mounting pads, and interchangeable seats. Special body and trim materials available.



SERIES 19L SEGMENTED

1 Piece Body	NPS 1 - 12 DN25 - 300
Materials	Stainless Steel & Carbon Steel
ASME Class	150, 300 & 600
Certification	PE(S)R UKCA S.I. 2016:1105

An extension of the versatile S19 segmented ball valve design which introduces advanced materials and trims for use in severe abrasive and erosive applications. Proprietary advanced coating technology is applied to the internal components of the segmented ball valve to provide increased hardness and bond strength for use in a wide variety of industries including: Pulp & Paper, Sugar & Ethanol Production, Mining, Refining Process Control, Food & Beverage, and Power Plants.



MEDIA CONTAINMENT UNIT

Valve Sizes	NPS ¼ - 10 DN8 - 250
Available For	Triad, 7/8000, S85, F15/F30, RF15/RF30, S7000

Media Containment Units are designed to prevent costly downtime and provide double stem sealing. Button-head check valve for injection of a sealing agent can be added. Designed for both automated and manual service, the MCU is easily installed in the field onto existing Bray ball valves.



STEAM ISOLATION

Valve Sizes	NPS ½ - 12 DN15 - 300
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Full port flanged ball valves are available for low temperature steam distribution and isolation service. Carbon steel, ASME Class 300 valve sizes NPS 4 (DN100) and larger are offered with optional bypass, feature quarter turn operation, positive shutoff and live loaded packing.

Multi-Port ball valves offer a wide range of flow patterns: 90° and 180° T & L port 3-way balls, and 90°, 180° and 270° 4-way balls. Features include a 4th seat to prevent leakage and maintain proper ball alignment, live loaded stem seal and locking handles.

Ported 3 & 4-way ball valves offering excellent versatility for mixing and diverting applications.

- ISO 5211 Secure Mount actuator top flange



SERIES 130

NPS ¼ - 2 DN8 - 50 Standard Port	3 Way
Materials	Stainless Steel
Pressure Ratings	NPS ¼ -1¼ (DN8 - 32): 1000 psi (69 bar) WOG NPS 1½ - 2 (DN40 - 50): 800 psi (55 bar) WOG Clamp Ends 200 psi (13.8 bar) WOG



SERIES 230/240

NPS ¼ - 4 DN8 - 100 - Full Port	230 - 3 Way 240 - 4 Way
Materials	Stainless Steel & Carbon Steel
Pressure Ratings	NPS ¼ - 1 (DN8 - 50): 1000 psi (69 bar) WOG NPS 1¼ - 4 (DN32 - 100): 800 psi (55 bar) WOG Clamp Ends 200 psi (13.8 bar) WOG



MULTI-PORT FLANGED

Full Port	MPF150: NPS ½ - 12 DN15 - 300 MPF300: NPS ½ - 6 DN15 - 150
Materials	Stainless Steel & Carbon Steel
Pressure Ratings	MPF150: ASME Class 150 MPF300: ASME Class 300

End connections designed to ASME 16.5



MULTI-PORT - STANDARD END CONNECTIONS *For custom end connections contact your Bray representative.*

Product	Threaded	Butt Weld	Socket Weld	Flanged	Quick Clamp	Optional Cavity Fillers
130	•	-	-	-	•	-
230 & 240	•	•	•	•	•	•
Flanged	-	-	-	•	-	•





SERIES S85

Body	2 Piece	• ISO 5211 Secure Mount actuator top flange • NSF/ANSI/CAN 61 & 372 certification • PE(S)R UKCA S.I. 2016:1105
Full Port	NPS ½ - 3 DN15 - 80	
Materials	Stainless Steel	
Pressure Ratings	NPS ½ - 3 (DN15 - 80): 1000 psi (69 bar) WOG 150 psi (10.3 bar) WSG	

Designed for ease of automation, features include live loaded stem seals through NPS 2 (DN50), anti-static protection, replaceable seats and seals, and safety latch handles.



SERIES S80

Body	2 Piece	• Optional seal welded body
Full Port	NPS ¼ - 4 DN8 - 100	
Materials	Stainless Steel	
Pressure Ratings	NPS ¼ - 4 (DN8-100): 1000 psi (69 bar) WOG 150psi (10.3 bar) WSG	

Series S80 ball valves have been designed to meet the needs of the chemical, textile and process industries. An economical full port valve featuring adjustable stem packing, safety latch handles, and optional oval handles.



SERIES S70/S90

Body	2 Piece
Standard Port	NPS ¼ - 3 DN8 - 80
Materials	S70 Stainless Steel S90 Carbon Steel
Pressure Ratings	NPS ¼ - 1 (DN8 - 25): 2000 psi (137.9 bar) WOG NPS 1¼ - 2 (DN32 - 50): 1500 psi (103.4 bar) WOG NPS 2½ - 3 (DN65 - 80): 1000 psi (69 bar) WOG 150psi (10.3 bar) WSG

An economical solution for high pressure applications in the process industry. Features include adjustable stem packing, integrally cast actuator mounting pad, safety latch handles, and optional oval handles.



SERIES S20/FS20

Body	1 Piece	• Firesafe – API 607 (Optional)
Reduced Port	NPS ¼ - 2 DN8 - 50	
Materials	Stainless Steel	
Pressure Ratings	NPS ¼ - 2 (DN8 - 50): 2000 psi (137.9 bar) WOG 150psi (10.3 bar) WSG	

One piece body design supplies maximum structural strength while reducing leak paths. Features include live loaded stem seals, safety latch handles, and optional oval handles.



SERIES S40

Body	1 Piece
Reduced Port	NPS ¼ - 2 DN8 - 50
Materials	Stainless Steel
Pressure Ratings	NPS ¼ - 2 (DN8 - 50): 1000 psi (69 bar) WOG 150psi (10.3 bar) WSG

An economical, compact, one piece body design that supplies maximum structural strength while reducing leak paths. Features include low operating torque and safety latch handles. Optional oval and wing handles are available.



SERIES HP, 3HP, & HX INSTRUMENTATION VALVES

3 Piece Body	NPS ¼ - 1 DN8 - 25
Materials	Stainless Steel
Pressure Ratings	HP: 6000 psi (413.7 bar) WOG HX: 10,000 psi (689.5 bar) WOG 3HP: 6000 psi (413.7 bar) WOG
End Connections	NPT Threaded



SERIES S51 COMMERCIAL UTILITY VALVES

2 Piece Body	NPS ¼ - 4 DN8 - 100
Materials	Brass
Pressure Ratings	NPS ¼ - 2 (DN8 - 50): 600 psi (41.4 bar) WOG NPS 2½-4 (DN65 - 100): 400 psi (27.6 bar) WOG NPS ¼ - 4 (DN8 - 100): 150 psi (10.3 bar) WSP
End Connections	NPT Threaded



ACTUATORS



Output Torque

50 to 44,130 lb-in at 80 psi
5.6 to 4986 N m at 5.5 bar



Output Torque

300 to 18,000 lb-in
33.8 to 2033.7 N m



Output Torque

5,310 to 70,000 lb-in
600 to 7909 N m



Series 92/93 Pneumatic - Double Acting & Spring Return

Rack & pinion, opposed-piston pneumatic actuators are self contained with integral internal porting. Units are suitable for both on/off and throttling applications.

- Double Acting Rotation: 90°, 135°, 180°
- Spring Return Rotation: 90°
- Supply pressure up to 145 psi (10 bar)
- Temperature Range: -20°F (-29°C) to +200°F (+95°C)

Series 70 Electric Actuator

This design offers greatly reduced space requirements, lighter weight and ease of installation and maintenance.

- Designed to meet NEMA 4, 4x (IP 65) or NEMA 4,4x,7,9
- 120 or 220 VAC single phase permanent split-capacitor reversible induction UL listed motor, 24 VDC motor optional
- 90° reversible rotation
- Temperature Range: -40°F (-40°C) to +150°F (+65°C)

FTG Series Worm Gear Operators

NPS ¼ - 12 | DN8 - 300 Ball Valves

Options: Locking Device, Chain Wheels, Horizontal Flag Indicator, 2" (50mm) Square Input Drive Nut, Grease Fitting & Flow Pattern Indicators for Multipoint Valves

Feature a ductile iron housing, aluminum bronze gear segment and one piece steel worm gear input shaft with tapered roller bearings on both ends. Adjustable travel stops provide precise adjustment in both open and closed positions. Housings are sealed and weather proof to fully isolate internal parts from atmospheric conditions.

SRH Series Spring Return Handles

(Deadman Handle)

NPS ¼ - 2 | DN8 - 50 Ball Valves

Manufactured from heavy duty stainless steel components to withstand frequent daily use in refueling, sampling, drains, and other OSHA applications that require positive safety closure of a manual valve. Each SRH Handle has a standard locking device.

Available in three sizes that mount directly to the rugged investment cast ISO 5211 mounting pads on compatible Bray full or standard port ball valves.