




# API 609 Triple-offset Butterfly Valve (ASME Class 150 to 1500)

Technical Datasheet & Specifications

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## 1. Product Overview

Parameter	Specification
Product Name	Triple Offset Butterfly Valve – Metal Seated (TOBV)
Description	Butterfly Valve for Oil & Gas, Petrochemical, Water Treatment. KSA/UAE export. A

## 2. Salient Features



✓ IBR Certified Valves

✓ NiAlBr NAB Valves

## 4. Technical Specifications

Parameter	Specification
Design Standard	API 609 (Category B), ASME B16.34
Pressure Rating	ASME Class 150 to 1500, PN10 to PN250
Size Range	3" to 100" (80 mm to 2500 mm)
Body Styles	Flanged Short & Long Patterns, Wafer, Wafer-Lugged
Face-to-Face	API 609, ISO 5752 Ser. 13/14/8, ASME B16.10
End Connections	ASME B16.5, ASME B16.47 (Series A & B), EN 1092-1
Testing Standard	API 598, ISO 5208, EN 12266-1
Seat Sealing	Replaceable Laminated SS316 + Graphite, Stellite hardfaced seat
Leakage Class	Bi-directional Bubble-tight, API 598 Resilient Seat, Rate A
Fire Safe Design	Certified to API 607 / ISO 10497

## 5. Materials of Construction

Part	Standard Material
Body & Disc	ASTM A216 WCB/WCC Carbon Steel, ASTM A351 CF8M/CF3M Stainless Steel
Body Seat	Hard-faced with Stellite 21 / Stellite 6 (Zero-friction seat, min 2mm overlay)
Laminar Seal Ring	UNS S31803 (Duplex) + Graphite / UNS S20910 + Graphite / UNS N06625 + G
Shaft / Stem	Stainless Steel ASTM A564 Gr 630 (17-4PH) / SS410 / SS316
Shaft Bearings	PTFE-lined sintered Bronze bushing / Stainless Steel backed metal bearings
Gland Packing	High-purity die-formed Flexible Graphite rings with braided carbon steel wiper

## 6. Dimensions



Conforms to API 609 or ISO 5752 Series 20. Bore sizes are full-bore from DN80 to DN1200. Standard Wafer, Lug, and Flanged face-to-face dimensions. General arrangement drawings (GAD) featuring electric actuator, pneumatic scotch-yoke actuator, or manual gear box dimensions are supplied per Purchase Order.

## 7. Testing & Inspection

Test	Standard Reference	Acceptance Criteria
Body Hydrostatic Shell	API 598 / ISO 5208	1.5 x Class Rated Pressure (e.g. 30 bar for 150#)
High Pressure Seat	API 598 / ISO 5208	1.1 x Class Rated Pressure (e.g. 22 bar for 150#)
Low Pressure Seat Air	API 598 / EN 12266-1	6 bar air pressure, 60s hold, zero bubbles/leak
Fire Safe Test	API 607 / ISO 10497	Intrinsically fire-safe design verified by fire test
PMI & Casting NDT	ASTM E1476 / ASME V	PMI check on SS316/Duplex disc and laminate

## 8. Design Standards & Codes

Code/Standard	Description
API 609	Butterfly Valves: Double Flanged, Lugged, and Wafer Type (standard)
ASME B16.34	Valves -- Flanged, Threaded, and Welding End (master pressure-temp)
ASME B16.5 / B16.47	Pipe Flanges and Flanged Fittings (dimensional standards)
API 607 / ISO 10497	Fire Test for Soft-Seated Quarter-Turn Valves
NACE MR0175 / ISO 15156	Materials for use in H2S-containing environments in oil and gas produ

## 9. Documentation & Certification

Deliverable	Details / Status
Material Test Certificates	EN 10204 3.1 Mill Certificates with full chemical & mechanical heat tra
Pressure Test Reports	Hydrostatic and pneumatic test certificates signed by QA/QC inspect
Fire Safe Certificate	API 607 / ISO 10497 fire-safe certificates signed by Lloyd's



## 10. General Notes

Frictionless zero-wear triple-offset seating geometry

Inherent fire-safe design certified per API 607

Bi-directional bubble-tight shutoff up to Class 1500

Low operating torque allowing cost-effective actuator sizing

Highly suited for: Oil & Gas Refineries & Pipelines

Highly suited for: Power Plant High-Pressure Steam Systems

Highly suited for: Chemical, Fertilizer & Petrochemical Processing

Highly suited for: High-Pressure Process Piping & Marine Environments

## 11. Contact & Enquiry

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## Product Range

### Gate Valves

Gate Valves Overview

Knife Edge Gate Valve

Sluice Valve

Pressure Seal Gate



API 600 Gate Valves

## ● **Globe Valves**

Globe Valves Overview

Piston Valve

Needle Valve

Pressure Reducing Valve

## ● **Ball Valves**

Ball Valves Overview

1-Piece Ball Valve

2-Piece Ball Valve

3-Piece Ball Valve

3-Way Ball Valve

Trunnion Ball Valve

Cryogenic Ball Valve

Fire Safe Ball Valve

## ✦ **Butterfly Valves**

Butterfly Valves Overview

Wafer Type

Lug Type

Flanged Type

NAB Seawater Valves

PTFE Lined

Triple Offset

## ✓ **Check Valves**

Check Valves Overview

Swing Check Valve

Dual Plate Check

Wafer Check Valve

Lift Check Valve

Non-Slam Check Valve

Silent Check Valve

**Alloy 20 Valves**



## ▼ Strainers & Filters

Y-Strainer

Basket Strainer

T-Strainer

## 🤖 Automated & Control

Actuated Ball Valves

Control Valve Pneumatic

Control Valve Electric

Automated Butterfly

## ★ Specialty & Other

Sight Glass

Flush Bottom Valve

Steam Trap

Safety Relief Valve

Blow Down Valve

Plug Valve

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## International Supply

Middle East, Africa, UK, South East Asia



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