TRIPLE OFFSET BUTTERFLY VALVES

PRODUCT DESIGN DATA

Description	BUTTERFLY VALVE High Performance Triple Offset Metal Seated Fire Safe Cryogenic also available
Design Code	API 609 / EN593
Size Range	NPS 3" – 96" / DN 80-2400
Maximum Pressure /Rating	150# to 1500#
Design Temperature	-196°C to +600°C (MOC Dependant)
End Connections	Wafer / Lug / Double Flanged / Butt-Weld
Face to Face	API609 Cat B Table 3A & 3C
Body Seat	Metal + GRAPHITE Solid Metal
Seat Leakage	Bi-Directional Bubble Tight Shutoff (CL.150 ~ 600) Uni-Directional Bubble Tight Shutoff (CL.900 ~1500)

MATERIALS OF CONSTRUCTION

BODY	
Carbon Steels inc. Low Temp	WCB, LCB, LCC
Austenitic/ Super Austenitic Stainless Steels	CF8, CF8M, CF3M, 6MO
Copper Alloys	Aluminium bronze
Duplex/ Super Duplex Alloys (1A-6A)	CD3MWCuN, CD4MCuN
Superalloys	Hastelloy® B, C, Inconel
Nickel Alloys	Monel®, Alloy 20
Others upon request	

SHAFT	AISI 410, AISI316, 17-4Ph, Monel® K500, UNS32760, Titanium	
SEAT	SS304 / SS316 / SS316L / Inconel with Graphite or PTFE	
HARD-FACING	Stellite Gr. 6 / Gr.21 / 13% Cr. Weld Overlay	
APPROVALS	API609 API598 ASME B16.34 BS EN593	ATEX PED – Category III API 607 NACE
CERTIFICATION	EN 10204 – 2.2/3.1/3.2	

MODELS

TOV – L
Lugged high performance
Triple Offset Butterfly Valve

TOV – W
Wafer non-lugged high performance
Triple Offset Butterfly Valve

TOV – F
Double Flanged high performance
Triple Offset Butterfly Valve

TRIPLE OFFSET

A high performance butterfly valve. This valve has three offsets from the centre. The third offset is the elliptical seat geometry. This along with the two eccentric shaft offsets, allows the disc to seal against the seat with no friction.

This seat design allows for uniform sealing, and thus bi-directional tightness at maximum differential pressure.

This triple eccentric design is a lower cost, lower torque option, than alternative style metal seated valves. It is low maintenance and offers an extended valve life.

The triple offset butterfly valve is used in critical demanding applications in:

- Oil & Gas
- Petrochemical
- Power Generation
- Process & Chemicals
- Water & Wastewater Treatment
- Marine