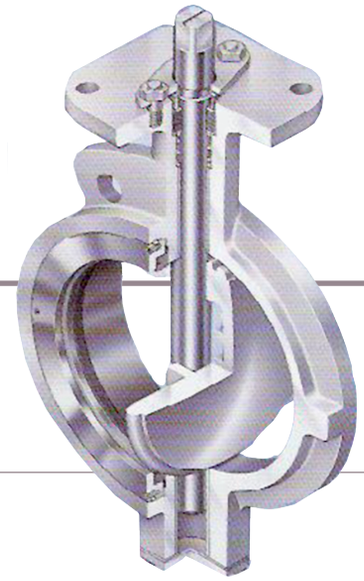
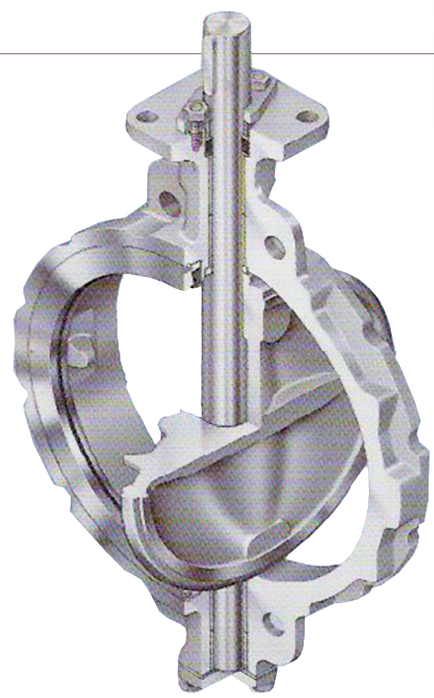
TOMOE

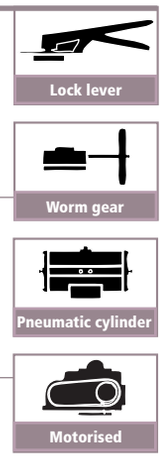
High performance butterfly valves to suit API standard

304A Wafer

304Q Lugged







Features and benefits

New stopper device

Japan Patent No.1769954 (80 to 300mm)
For the 80 to 300mm models, automatic aligning and disc overrun prevention are ensured by the special spherical design of the inner surface of the body disc hub edge. As for the 350 to 600mm models, a spacer ring is provided between the mating surfaces of the disc hub edge and inner surface of the body for disc alignment.
Disc overrun is prevented by a protrusion on the inner surface of the body.

Double eccentric geometry

The axis of disc rotation is double offset to the seat ring. When the disc rotates, it unseats at a small turning angle by its cam effect. The design exhibits tight shut-off, reduced torques, chemical resistance, excellent throttling capabilities and the ability to operate with relatively high pressure drops. It also prevents seat abrasion and provides reliable sealing performance over long periods.

Bi-directional flow

Seals flow in both directions. The valves can be used even if the flow changes direction. (There are pressure limitations for each direction of flow. See chart for recommended specifications).

Easy replacement of the seat ring

The ball lock method is used to simplify replacement of the seat ring.

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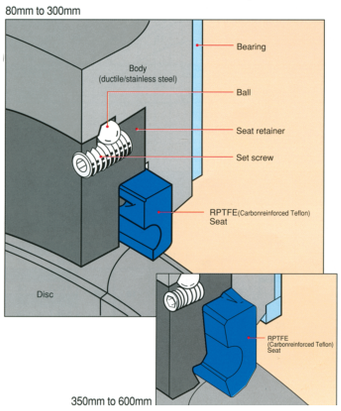
304A Wafer 304Q lugged

General Description

Designed to suit those severe conditions such as high temperature, high pressure or high velocity, which disallow the use of soft resilient seated butterfly valves.
Ideal for use in chemical processes and applications with low pressure steam and high temperature gas.

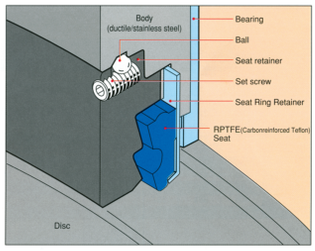
Fire Safe Seat (as Option)

80mm to 300mm



350mm to 600mm

RPTFE (Carbon Reinforced Teflon) as standard



Standard Specification

Valve nominal size		80mm to 300mm		350 to 600mm	
Face-to-face dimensions		API 609 (Class 150)		API 609 (Class 150) ISO 5752 (25 Series) JIS B 2002 (47 Series)	
Connection		Wafer type			
Pressure rating		ANSI B16.34 Class 150lb (Seat rating is designed to suit APII 609 150lb above zero degree C			
Applicable flange standard		JIS 10K/16K/20K, ANSI 125/150lb, BS 10 Table F, BS 4504 PN 10/16, DIN NP 10/16		JIS 10K/16K/20K, ANSI 125/150lb, BS 10 Table F, BS 4504 PN 10/16, DIN NP 10/16	
Body shell test		Max. 3.2MPa as per API 598			
Seat leak test		Max. 2.3MPa as per API 598. Low pressure closure test is available upon request.			
Max. working pressure #1		2.0MPa			
		Bi-directional flow (Flow to disc side is recommended).			
		Max. working pressure at reverse flow for 250mm and 300mm is 1.6MPa		Max. working pressure at reverse flow is 1.0MPa	
Working temperature range #2		-29 to 232 degrees C (RPTFE)		-29 to 232 degrees C (RPTFE)	
Seat leakage		-20 to 200 degrees C (White PTFE as option)			
		ISO 5208 Rate A, API 598-1996			
Standard materials	Body	SCPH2/WCB	SCS 14A/CF8M	SCPH2/WCB	SCS 13A/CF8
	Disc	SCS 13/CF8 (Hard chrome plating)	SCS 16A/CF3M (Hard chrome plating)	SCS 13/CF8 (Hard chrome plating)	
	Stem	SUS 420 J2	SUS 329 J1 (Over -10 degrees C) SUS 316L (Applicable for above -10 degrees and under 1.6MPa) SUS 329 J4L (Applicable for above -10 degrees C and over 1.6MPa)	SUS 420 J2 (under 1.0MPa) SUS 630 (over 1.0MPa)	SUS 304 (Under 1.0MPa) SUS 630 (Over 1.0MPa)
	Seat ring	RPTFE (Carbon Reinforced Teflon) as standard, White Teflon seat, Fire safe seat as option			
	Gland packing	RPTFE			
Top flange		ISO 5211			
Bonnet type		Open bonnet			
Actuators	Lock Gear	80 to 150mm			
	Worm gear	80 to 600mm			
	Pneumatic cylinder				
	Motorised				
Coating		Silicon resin coating (grey N7) for 200 degrees C and lower. Heat resistant silver coating for over 200 degrees C. No painting for stainless steel.			

#1 Please see pressure-temperature rating table. #2 Please consult us if the pressure exceeds 1.6MPa.