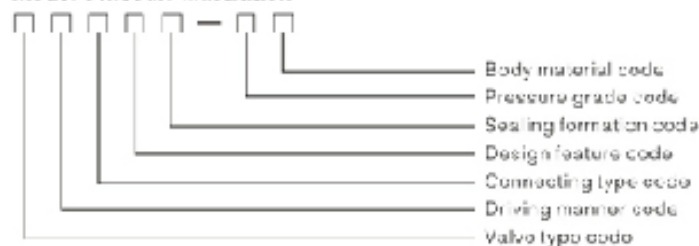


Model Schedule illustration



- Valve type code: 0—Butterfly valve
- Driving manner code: 3—Worm wheel and screw transmission; 6—Air driving; 9—Electric driving (Hand wheel driving omitted)
- Connecting type code: 1—Flange connecting; 6—Welded connection; 7—Water type connecting
- Design feature code: 1—Single eccentric structure; 2—Double eccentric structure; 3—Three eccentric structure; 4—Variable eccentric structure
- Sealing formation code: X—Rubber; F—polytetrafluoroethylene; H—Alloys steel; W—Stainless steel body; Y—Hard alloy
- Pressure grade code: The 10 times of the nominal pressure (MPa), pound grade no. practical number
- Body material code: Z—HT200; C—WCB; P—CF8; 7G—Cr18Ni9Ti; R—CF8M; 7G—Cr18Ni12Mn2Ti

Example: D342Y-16P

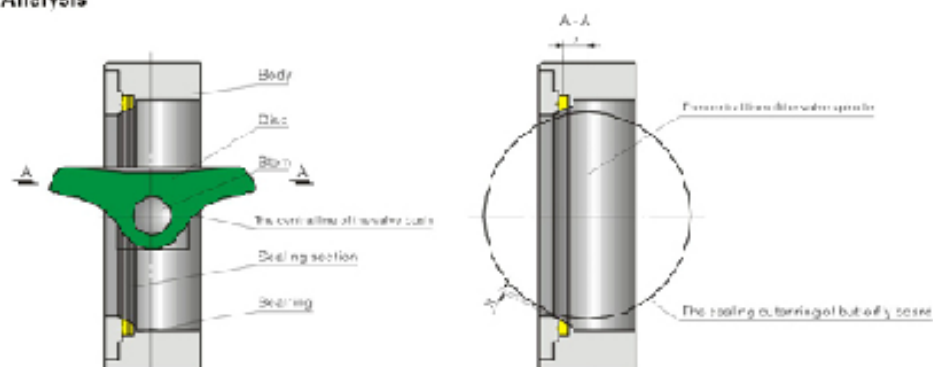
Denotes 1.6MPa nominal rating pressure, worm wheel and screw transmission, flange-connecting, double eccentric structure, CF8 valve material, and hard alloy sealing material.

Products Design Features

The series of the butterfly valve can be applied to food, drink, medicine, chemical, industry, industrial environmental protection, water treatment, high building, water supply, drainage and gas, etc. used to start or stop or adjust medium flow quantity. The major features of the structure:

1. Simple structure, small volume, light weight, small installation dimension.
2. Having two kinds of seal material: soft and hard, can be used in various working conditions, with good sealing performance, and long life span.
3. Anti-fire structure designed butterfly valve can prevent the expanding of an accidental fire once the soft sealing valve seat of the butterfly valve catches fire and damaged the stainless steel sealing ring will give play to the butterfly valve keep emergency closed.
4. In the condition of the butterfly valve fully opened, it has little flow resistance, and in the condition of the butterfly valve partially opened, the flow quantity can be controlled sensitively.
5. Little driving couple convenient and quick operations.

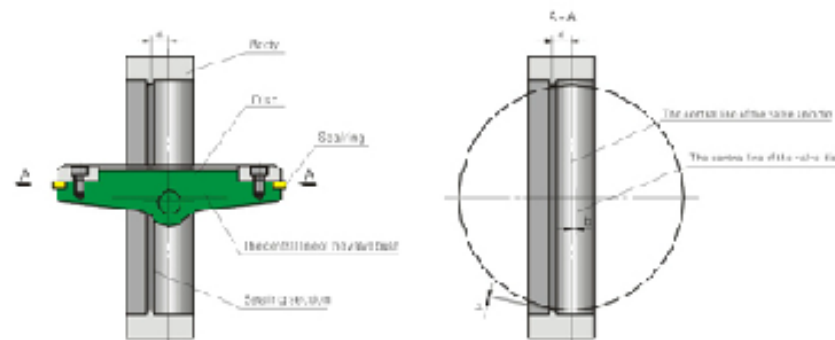
Sealing Principle Analysis



The sealing structure of the single eccentric seal butterfly valve

1. The sealing principle of the single eccentric butterfly valve

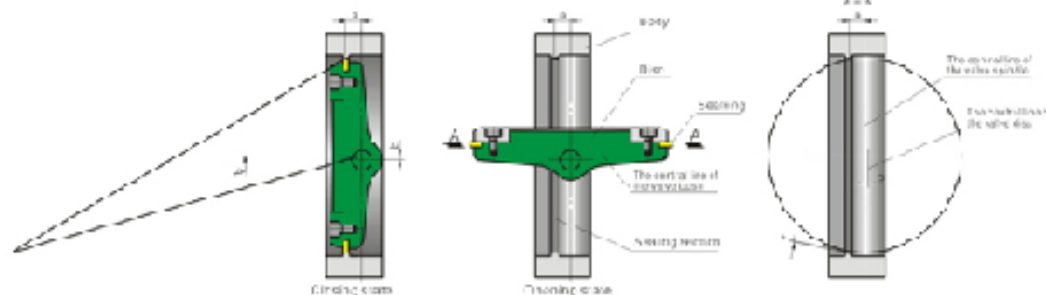
As the center of gyration of the disc (the center of valve spindle) and the sealing section of the disc are set up in eccentricity, it makes the sealing section of the disc gradually separate from the sealing section of the valve seat in the course of opening the butterfly valve. When the disc revolves to $27^\circ \sim 28^\circ$, the sealing section of disc will completely break away from the sealing section of the valve seat, and when completely opened, a gap X will be formed in two sealing sections, thus making the relative mechanical wear and extrusion decrease between two sealing sections, and ensure the seal of the butterfly valve.



The sealing structure of double eccentric seal butterfly valve

2. The sealing principle of the double eccentric seal butterfly valve

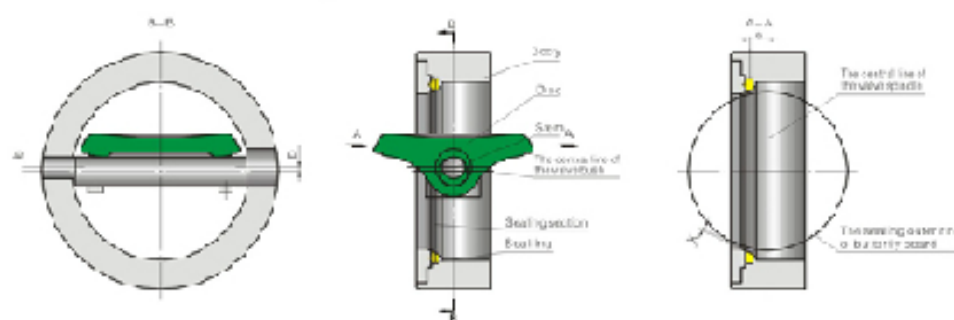
As making the center of gyration of the disc (the center of the valve spindle) forms polarization in size (b) with the central line of the valve bush, based on the single eccentric butterfly valve, which makes the sealing section of the disc brake away from the sealing section of the valve seat quicker than the single eccentric seal butterfly valve does. In the course of opening the butterfly valve, when the disc revolves to $3^\circ \sim 12^\circ$, the sealing section of the disc will completely brake away from the sealing section of the valve seat, and when completely opened, a bigger gap γ will be formed in two sealing sections. The design of this kind of butterfly valve can greatly decrease the mechanical wear and abrasion and deformation, and improve the sealing performance of the butterfly valve.



The sealing structure of the three eccentric seal butterfly valve

3. The sealing principle of the three eccentric butterfly valve

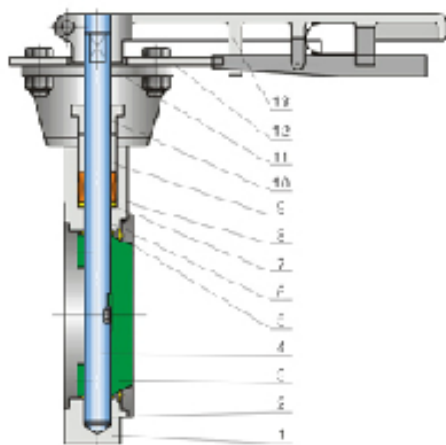
As making the central line of the valve seat form a polarization in angle (b) with the central line of the valve bush, based on the double eccentric butterfly valve, which makes the sealing section of the disc immediately brake away from the sealing section of the valve seat at the moment of opening, and contact the sealing section of the valve seat at the moment of closing, during the course of opening and closing. When completely opened, a gap γ same to the double eccentric seal butterfly valve will be formed in the two sealing sections. The design of this kind of the butterfly valve can completely remove the mechanical wear and scratch between the two sealing section, and greatly improve the sealing performance and life-span of the butterfly valve.



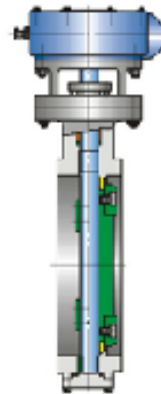
The sealing structure of the various eccentric seal butterfly valve

4. The sealing principle of the various eccentric seal butterfly valve

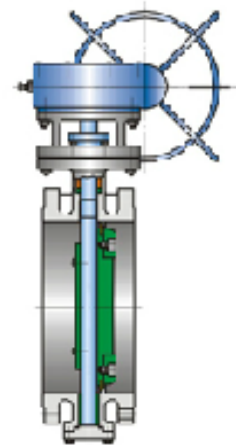
The unique feature of the various eccentric butterfly valve is the valve handle shaft for installation of the disc, with a structure of three parts style. There are two parts with a concentric shaft of the valve handle in three parts style, but the central line of the middle shaft is a centerline spacing away from the shaft line of the both sides, and the disc is installed in the part of the middle shaft. This eccentric structure can make the disc be in the type of the double eccentric at the situation of fully opened, but in the single eccentric type when the disc is revolved. When approaching closing, the disc will move a distance towards the sealing cone section, and the sealing section of the disc and valve seat is in the reliability of sealing performance, because of the function of the eccentric shaft.



Manual Operated Butterfly Valve



Worm Driven Wafer type Butterfly Valve



Worm Driven Flanged Butterfly Valve

Technical Specification

Structural form	Single eccentric structure, Double eccentric structure, Three eccentric structure, Variable eccentric structure
Design reference	API
Driving manner	Hand-operated, worm wheel & worm screw pneumatic operated, Electric-driving
Design standard	API 609, MSS 3P-03
Face to face	ASME B16.11, API 6D, MSS 31-61
Flanged ends	ASME B16.5, ASME B16.47
Test & inspection	API 598

Note: The sizes of valve connecting flange and butt-welding terminus can be designed according to customer's requirement.

Major Parts Material Form

No.	Part name	Material	No.	Part name	Material
1	Body	WCB, CF8, CF8M, CF3, CF3M	8	Packing	Graphite
2	Butt	CU, PTFE+Stainless steel	9	Gutting cover	Zu13, SS, MA216-420
3	Wedge	WCB, CF8, CF8M, CF3, CF3M	10	Gland	WCB, CF8, CF8M
4	Stem	1G13, 2G13, 1G13N9T, 0G13N12V2T	11	Yoke	WCB, CF8, CF8M, CF3, CF3M
5	Sealing seat	A105 (RUDDer), A106 (F6), Stainless steel	12	Indicating plate	CU, Stainless steel
6	Butt	CU, PTFE+Stainless steel	13	Wrench	KTH300, QT400-17
7	Packing seat	Zu13			

Note: Relevant material of America standard is not to be particularized respectively.