

## Butterfly valve structure

Butterfly valves are used to open and close(seal type) or adjust the medium flow in pipes in the fields of foodstuff, drinks, chemical, industrial, water treatment, high-rise constructions, water supply and drainage etc.. they mainly structured as following:

1. Simple structure, small outsize, light weight and low installation dimensions, according to the types of body connection, they are basically classified to wafer type (including lug wafer type), flanged and welded.

2. Sealing materials may be soft or hard, placed on body or disc to meet different working conditions, and to effect good seal and long life.

2.1 Offset butterfly valves, pressure rating  $\leq$  Class 600.

Centered sealing structure is applicable for pressure rating  $<$  Class 150.

Sealing ring (PTFE) is placed on the valve body to feature the following :

- To effect dependable seal with no need of accessory sealing ring or metal bracing ring.
- Bidirectional leakproof seal.
- Little maintenance and long service life.

2.2 Multiplayer Hard seal structure

Multiplayer hard seal structure is applicable for single, double and triple offset butterfly valves, pressure rating  $<$  Class 600. And triple offset butterfly valve can maintain bidirectional leakproof. multiplayer sealing ring is composite of stainless steel and nonmetal material. The nonmetal material can be flexible graphite, PTFE or non-asbestos material. The material can be flexible graphite, PTFE or nonasbesine material etc. according to the actual working conditions.

3. Elastic ring hard seal structure is the structure of J-type metal sealing ring. It is applicable for single and double offset butterfly valves, pressure rating  $<$  Class 300, provided with fire proof structure to adapt to conditions with great temperature changes, it is featured by outstanding seal, long service life and easy manufacture.

4. Anti blowout shaft

Internally & externally retained, double times blowout proof stem design per API 609.

- Internal :lower and shaft is grooved with half ring, prevent stem blowout .
- External: shaft is designed with an integral collar and is blowout prevented by gland follower.

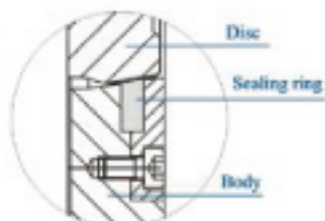
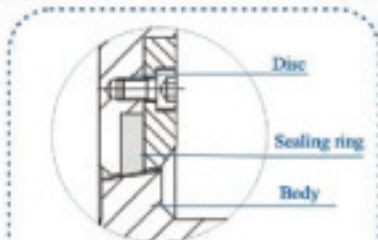
5. Fireproof butterfly valves can stop the expansion of fire. Once the sealing seat of butterfly valve is on fire, the stainless steel sealing ring will act to make butterfly valve immediately sealed. HAQUN triple offset butterfly valves are all metal construction and sealing, it is inherently fire safe design. Fire safe tests to API 607 were successfully performed in haqun research & development laboratory.

6. When butterfly valves is fully opened ,flow resistance is low.  
When partially opened, it may carry out sensitive flow control .

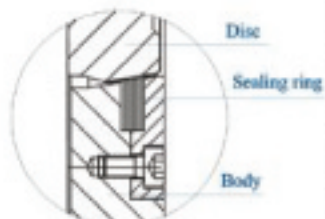
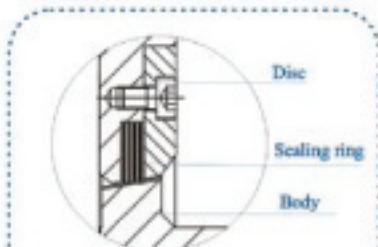
7. Low driving torque, easy and quick operation.

8. Zero leakage

Disc-seat sealing was achieved by torque force evenly loaded on disc laminated seal edge , which has resilient function to assure Zero leakage in both hydrostatic or air test per API 598.



Soft sealing structure



Multiplayer Hard seal structure

