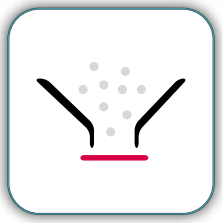
OYSTER HYGIENIC BUTTERFLY VALVE BOLTED SERIES

TOP QUALITY HYGIENIC PROCESS VALVES

The Oyster Bolted Hygienic butterfly valve offers a complete range of high quality valves for powder handling applications in the Food, Pharmaceutical and Fine Chemical industries.

The valve is engineered to offer cost effective solutions and long productive lifetime.

- Valve body components are machined from solid wherever possible to prevent ovalisation and pitting due to welding.
- Unlike competing valves there are no cast components in product contact so as to minimize the risk of micro-porosity.
- Optimized seal parameters reduce opening torque while ensuring tight closure.
- Clean design and high quality mirror polished internal finish minimizes possibility for product to accumulate.
- Choice of body and seal materials mean that the valve can be specified in a vast range of applications including corrosive acids and solvents.
- Flexibility in terms of available customizing options mean that the valve can easily be tailored to meet the most exacting requirements.



FIELD OF APPLICATION

Powder shut off

OYSTER HYGIENIC BUTTERFLY VALVE

Connection to host system

The Oyster Bolted valve can supplied with a wide range of connection types to the host installation, including:

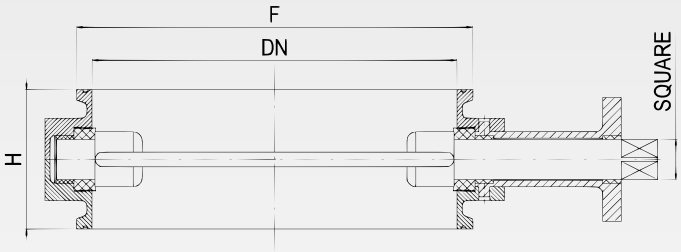
- Tri-clamp (ASME/BPE, BS4825, DIN 32676 – other standards available on request)
- Weld end
- Docking collar
- BFM flanges
- Wafer-type for fitting between flanges

KEY DIMENSIONS

(Dimensions in mm)

Nominal size DN	100	150	200	250	300
F*	4”	6”	8”	10”	12”
L	140	165	190	215	240
H	76	76	76	76	76
Square	17x17	17x17	17x17	17x17	17x17
Weight - Kg	4,5	6,6	8,9	11,1	14,3

* TC specification is ASME/BPE unless otherwise specified. A full range of tri-clover types can be supplied. Weight given is indicative only and may vary according to the configuration. Excl. Handlever.



INSTALLATION ZONE

Working pressure	
In/Out	0.5 bar (7.3 psi)
Upstr./downstrem*	Powder tight
Temperature	
Manual	-30°/+90°C (-22°/194°F)
Actuated	-20°/+80°C (-10°/176°F)

* Pressure tested valves can be supplied on request depending on seal material and process conditions. Not available for PTFE-encaprulated seal.

For use in classified hazardous zones the valve can be supplied in conformity with the requirements of DIRECTIVE 2014/34/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 26 February 2014 (ATEX) and marked accordingly.

The valve operates at a low torque which means that it is easier to operate especially in confined spaces, or that it can be operated by smaller, lighter and cheaper actuators with lower air requirements.

The reduced torque reduces wear and tear on the valve, the actuator and the installation as a whole.

OTHER OPERATING INFORMATION

Opening/Closing torque - Nm (Lb-ft)

	DN100	DN150	DN200	DN250	DN300
Silicone seal	25 (18)	30 (22)	40 (29)	50 (37)	90 (66)
PTFE-Lined	-	36 (27)	50 (37)	60 (44)	100 (74)
Other materials	30 (22)	42 (31)	60 (44)	70 (52)	110 (81)

OYSTER HYGIENIC BUTTERFLY VALVE

Guide to choosing gasket material

Choosing the correct gasket material for any application is fundamental to achieving a good valve performance.

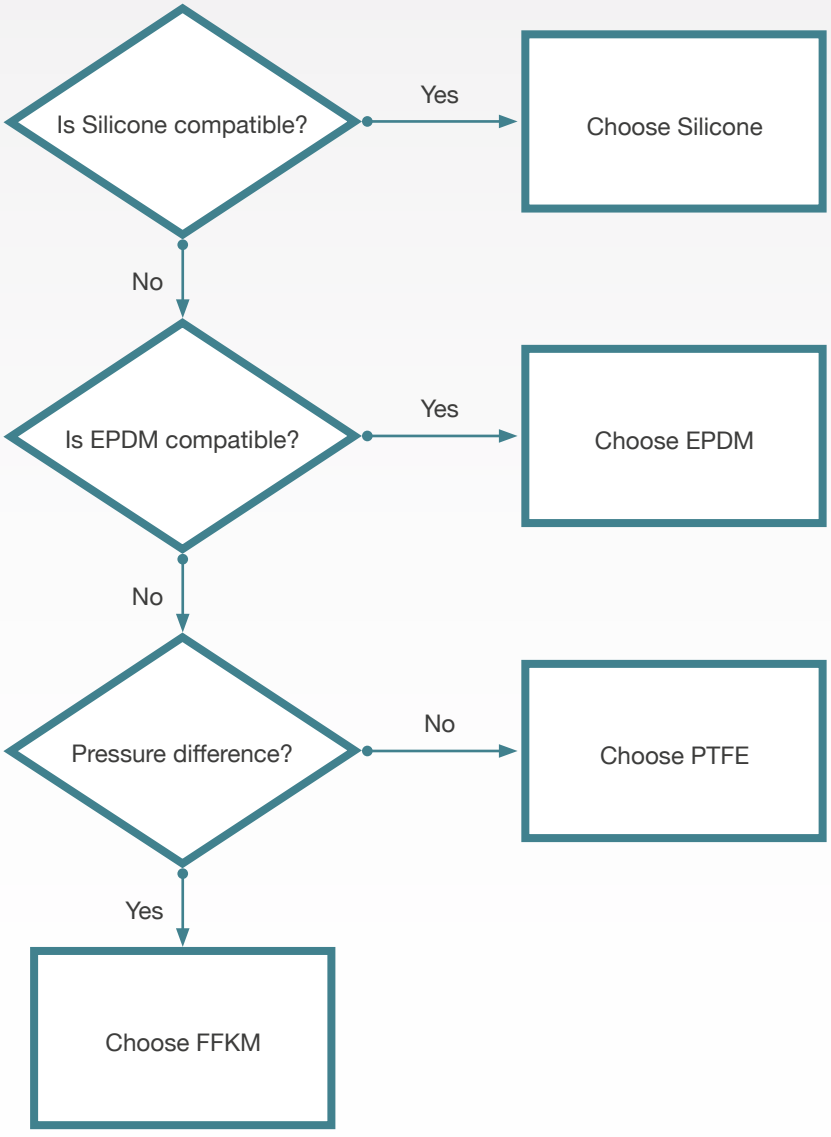
There are important differences in cost and performance between the available seal materials.

In particular, while Silicone gives the best combination of good sealing and low torque it can be damaged by contact with certain solvents.

On the other hand PTFE-encapsulated silicone has very good chemical compatibility but performs poorly in systems under pressure, and is not suitable where there may be pressure difference from upstream to down stream of the valve.

Preliminary check:

- Chemical compatibility with product/solvents
- Tightness requirements
- FDA conformity



OYSTER HYGIENIC BUTTERFLY VALVE

All Oyster Bolted valves are suitable for a full range of methods of operation/ automation.

OPTIONS FOR OPERATION:			
Manual operation		**Automatic operation**	
Standard:	Handlever with locking pin	**Actuator types:**	Double acting Rack & pinion pneumatic
Orientation:	0-90°		Spring return Rack & pinion pneumatic
	45-45°		Electric actuator
Options:	Full stainless steel lever	**Materials:**	Anodised aluminium, St/St
	Customised orientation	**Options:**	Solenoid valve
	Lockable		Position sensors, limit switches
	Position sensor		4-20 mA positioner for proportional control
	Push & turn lever		Full st/st enclosure
	Multi-position stops		Quick release Actuator support
		ATEX:	Certification available on request: II 2GD cIIB T4/T135°C
		Air supply:	Min 5bar (75 psi)/max 10bar (150psi)
			Dry, unlubricated.

A range of seal materials is available to adapt the valve to the most stringent operating conditions.

The choice of seal materials depends on the process conditions and the presence of solvents and other aggressive materials.

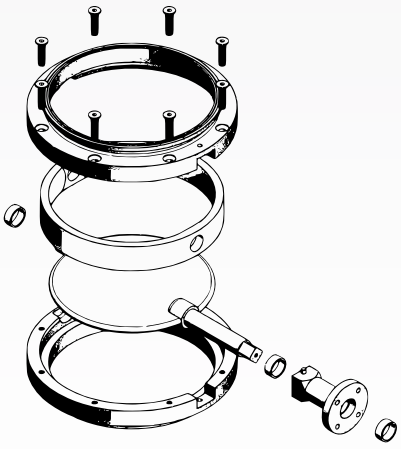


TABLE OF MATERIALS		
Ref	**Part Name**	**Material options**
1	Halfbody 1	AISI 316L (EN 1.4404), C-22
2	Halfbody 2	AISI 316L (EN 1.4404), C-22
3	Leaf	AISI 316L (EN 1.4404), C-22
4	Machine Screws	AISI 304 (EN 1.4301)
5	Gasket*	Silicone, EPDM, PTFE-lined, FFKM (Kaflon)
6	Bushings	PTFE, PEEK
7	Lever/Actuator Support	AISI 304 (EN 1.4301)
8	Handlever & bolt	AISI 304 (EN 1.4301)
* Material in compliance with FDA §177,2600. Refer to guide on P.3		

All materials used in the construction of the Oyster Bolted Hygienic series valve are fully compliant with the requirements of the FDA, EN1935/2004 and cGMP. Product contact surfaces are mirror polished to the highest pharmaceutical standards.

Silicone seals are in addition, USP Class VI certified.

Full documentation is available for every valve, on request.

Above all the valve is designed to be user friendly and easy to maintain, to ensure a long and profitable service lifetime.

OYSTER HYGIENIC BUTTERFLY VALVE

The Oyster Bolted valve is a modular system in which the same basic valve can be supplied as:

- General purpose butterfly valve
- Flowmaster dosing valve
- Flexible valve for handling tablets without damage

Oyster docking collar

Where it is required to fit a valve underneath a machine or hopper, even with Tri-clamps, this can be a tricky operation requiring more than one person.

For this reason we have perfected the Oyster Docking Collar bayonet system.

This is recommended for valves of 8" and over and enables this awkward 2 or 3 person job to be accomplished easily by a single operator.

The Compact Docking Collar system consists of a proprietary welding ferrule with machined slots which is welded in place on the outlet of the most system. The valve in this case is fitted with locating pins which engage in the slots so that as the valve is turned through a few degrees, the valve is held in position against the ferrule in such a way that the operator's hands are freed to enable him to fit the clamp to secure the valve in position. An O-ring ensures tightness at the join.

Removing the valve is also easier and <u>above all safer</u> as it is now a two stage process.

1. Bring valve to docking collar.

2. Pins engage in slots, valve held in position.

3. Attach clamp to secure valve in place.

OYSTER HYGIENIC BUTTERFLY VALVE

Configuration and Part Number Guide to ValveEngineering Bolted Valves

Valve Type	Bolted Body	Nom. Size	Seal Type	Conn. In	Conn. Out	Operation	ATEX
AA	**B**	**NNN**	**A**	**A**	**A**	**XX**	**.A**

BV	Butterfly Valve (Pharma Grade)
TV	Tablet Valve
BF	Food Grade Valve

B	Bolted

Nominal Size (mm)

S	Silicone
E	EPDM
P	PTFE Encapsulated
K	FFKM (Kaflon)

A	TC Asme/BPE
B	TC BS4825
D	TC DIN 32676
W	Weld End H=15.5x3
Y	Compact Docking Collar
H	Hose connection
N	Wafer
S	"Zanchetta"-type Clamp Flange

L0	Handlever 0-90°
L2	Handlever 45°-45°
S5	Actuator Support F05, Drive Square 14
S6	Actuator Support F05, Drive Square 17
S7	Actuator Support F07, Drive Square 17
Q5	Quick Release Act. Supp. F05
Q7	Quick Release Act. Supp. F07

.X	Rated ATEX 1/21 T4/T135°C
[Blank]	For Safe Area or Manually operated (Outside Scope Of ATEX)

Availability of seal materials

	DN100	DN150	DN200	DN250	DN300
Silicone FDA, USP Class VI	YES	YES	YES	YES	YES
EPDM White FDA	YES	YES	YES	YES	YES
PTFE-Encap-sulated	NO	YES	YES	YES	YES
FFKM (Kaflon)	YES	YES	YES	NO	NO

NB PTFE seal is not suitable where there may be a pressure difference from upstream to downstream of the valve.

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