Lined Butterfly Valve

衬氟高性能蝶阀 High Performance Lined Butterfly Valve

有氟密管阀

特性说明

- 衬氟高性能蝶阀阀体采用分体式组合，其中阀杆与蝶阀为一体，表面均匀包裹一层氟塑料，与钢件的附着力强。阀门工作时只有全氟塑料阀座和衬氟塑料蝶板与介质接触。阀体通道内表面光滑，流体阻力小，CV值高，流通能力强，扭矩适中，完全达到介质的零泄漏,该阀门体积小、重量轻、设计合理、结构紧凑、开关迅速、外形美观、性能可靠、操作轻便，使用寿命长。

- **衬里材料:** PTFE, FEP, PFA, GXPO等。
- **连接形式:** 对夹式、法兰式、凸耳式。
- **驱动方式:** 手动、蜗轮、电动、气动、液动。

Product Description

- The lined butterfly valves bi-directional flow is possible at maxmium operating pressure. Since the valve port corresponds to the piping diameter, a high flow capacity is guaranteed.

- It features ease of maintenance, repeatable on-off, long life durability.

- The concentric design is commonly used in the power generation, brewing, water and food industries and suitable for both gaseous and liquid service. Typically applied in chemical/petrochemical process, food and beverage, and pulp and paper etc.

- **Lining material:** PTFE, FEP, PFA, GXPO etc.
- **Connection type:** Wafer, Flange, Lug etc.
- **Operation methods:** Manual, Worm Gear, Electric, Pneumatic and Hydraulic Actuator.

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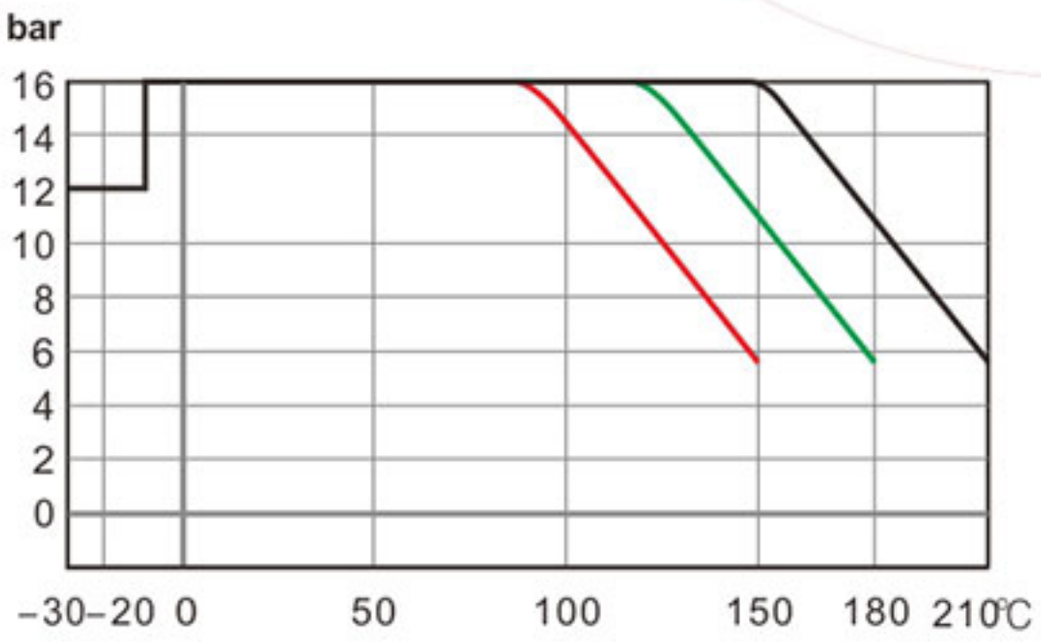
技术性能规范 Technical Specification

设计标准 **Design & Manufacture Standard**		HG/T 3704, GB/T 26114		API 609
结构长度标准 **Face-to-face Dimension Standard**		HG/T 3704, GB/T 12221		ASME B16.10
法兰标准 **Flange Standard**		HG/T 20592, GB/T 9119		ASME B16.5, JIS B2220
检验与试验标准 **Inspection and Test Standard**		GB/T 13927, JB/T 9092		API 598
公称通径 **Nominal Diameter**		DN50~DN1600		2"~64"
公称压力 **Nominal Pressure**		1.0MPa	1.6MPa	150LB
试验压力 **Test Pressure**	壳体试压 **Shell Test**	1.5MPa	1.5MPa	1.5MPa
	高压密封 **High Pressure Sealing**	1.1MPa	1.1MPa	1.1MPa
	低压密封 **Low Pressure Sealing**	0.6MPa	0.6MPa	0.6MPa
适用温度 **Temperature Range**		PFA: -29°C~200°C PTFE: -29°C~180°C FEP: -29°C~150°C GXPO: -10°C~80°C		
适用介质 **Applicable Medium**		盐酸、硝酸、氢氟酸、液氯、硫酸、王水等强腐蚀性介质 Strong corrosive medium i.e. hydrochloric acid, Nitric acid, Hydrofluoric acid, Liquid chlorine, Sulfuric Acid and Aqua regia etc.		

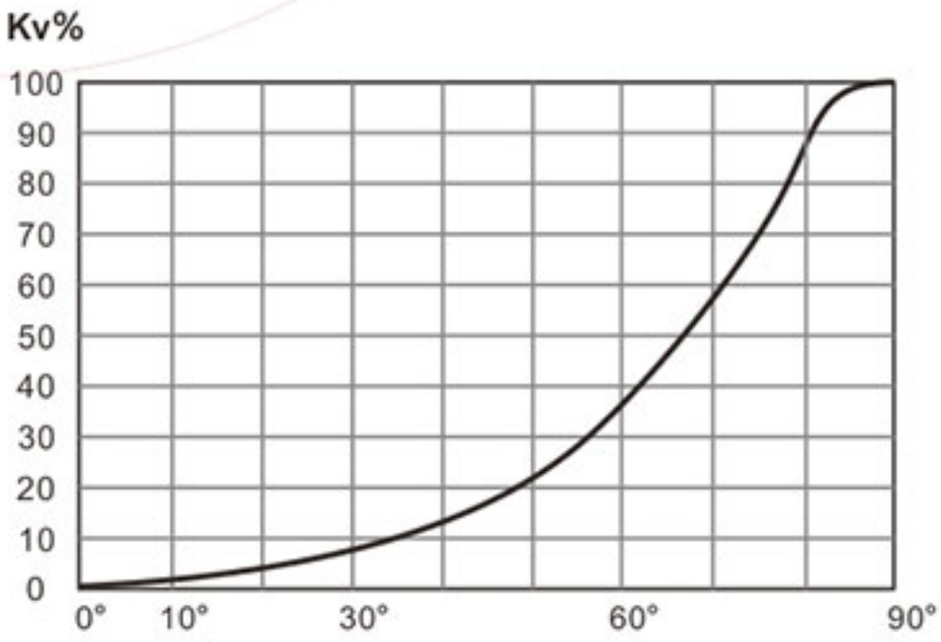
特注: 衬氟阀门壳体试压和密封按照上表测试, 测试标准仅参考通用阀门标准。高压力特殊情况协商处理。
Note: Test standard refers general valve standard, high pressure should be customized for processing.

氟材料压力温度曲线 Pressure-Temperature Curve



真空 Vacuum: 0.1mbar
备注 Note: —PFA —PTFE —FEP

流量特性图 Flow Characteristic



阀位角度 Valve Position Angle
1Cv=1.167Kv

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衬氟高性能蝶阀结构剖视图
Cutway view for High Performance Lined Butterfly Valve

材料明细表 Material Specification

公称通径 Nominal Diameter		DN50-DN500, 2"-20"		
公称压力 Nominal Pressure		1.0MPa 1.6MPa 150LB		
No.	名称 Name	材料明细 Material Lists		
1	螺钉 Bolt	A193 B7	A193 B8	A193 B8M
2	压板 Plate	CF8		
3	上阀体 Upper body	WCB	CF8 CF8M	CF3 CF3M
4	钢套 Steel sleeve	SS304		
5	O型圈 O-ring	氟橡胶 氟橡胶+PFA VITON, VITON+PFA		
6	上硅胶垫 Elastomer backing	硅橡胶 氟橡胶 Silicone rubber, VITON		
7	阀杆 Stem	SS410 SS420 17-4PH		
8	阀座 Seat	PFA FEP GXPO		
9	蝶板 Disc	SS304/SS316+衬里材料 SS304/SS316+Lining material		
10	下硅胶垫 Elastomer backing	硅橡胶/氟橡胶 Silicone rubber, VITON		
11	下阀体 Downside body	WCB	CF8 CF8M	CF3 CF3M
12	内六角螺钉 Screw	A193 B7	A193 B8	A193 B8M

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衬氟高性能蝶阀结构特点 Structure Features

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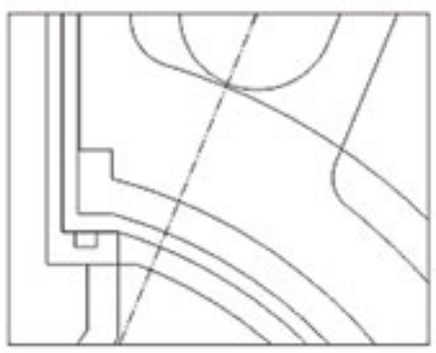

蝶板和阀座上密封采用四道O型圈密封，硅橡胶衬垫和轴套采用整体注塑成型，减小装配间隙和空气腐蚀，结构美观，防止外漏和内漏。

The in-line resilient seat assembly assures optimum pressure distribution of the body liner to the disc assembly, providing tight sealing under all operating conditions. The wider seal-band provides a broader sealing area.

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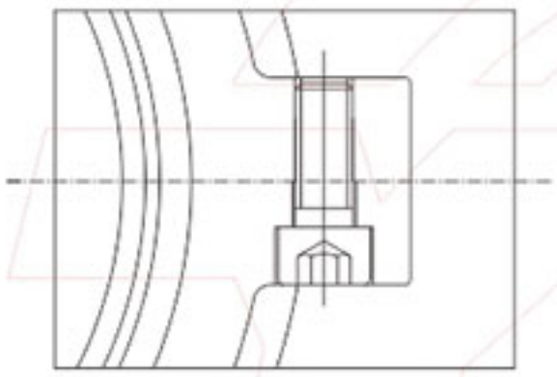
全衬设计结构，与介质接触面完全采用氟塑料隔离，防止金属件被腐蚀、使阀门使用寿命更长。

Both the disc and the shaft are lined by PFA/FEP. The shaft and the seal components are protected by PFA/FEP from the flow medium, and the bottom shaft also fully lined, assures optimum corrosion resistance and eliminates a potential path.

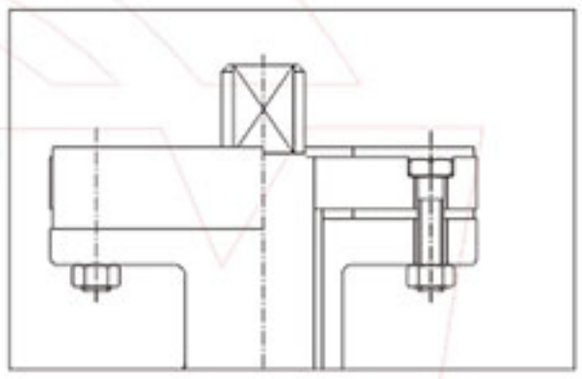
❸



上体和下体采用分体结构，内六角螺钉连接，氟塑料热胀冷缩情况下，起到调节作用。

The body is splited and connected by hexagonal screw. When the valve operated long time, the fluorine plastic worn or shrinks, regulate the inner hexagonal screw, tighten the sealing and to achieve the equal effect of new valve.

❹



上平台法兰采用ISO 5211标准设计，阀杆采用扁方设计便于安装,阀座上密封采用压板钢套设计，便于密封调试。

ISO 5211 actuation mounting pad ensures robust performance, while providing compact system design. Moreover, benefit of live loaded stem sealing system is atmospheric sealing integrity and no manual adjustment over the life of the valve.

注意事项

- 阀门未使用前蝶板应定位于5~10°开度处。
- 阀门应储存在室内，首选温度范围为0至25°C(40至80°F)。
- 当阀门储存很长一段时间后，请每隔3个月打开和关闭一次。
- 装运和储存阀门时要确保阀体上没有沉重的负荷。
- 阀门位置在一般情况下，安装衬氟塑料蝶阀时，使阀杆位于垂直位置，并将执行机构直接垂直安装在蝶阀的上方；阀门通常不倒装。衬氟塑料蝶阀与止回阀或者泵相连时，要在它们之间使用一个膨胀节，以确保蝶阀不会干扰邻近的设备。
- 安装衬氟塑料蝶阀时，管道一定要对中，否则会使蝶板外径撞击管道内径，导致蝶板边缘损伤，扭矩增大并且泄漏。

Note

- The disc should be opened from angle 5~10°if not working.
- The valve should be stocked indoor, and the prior temperature range is 0-25°C(40~80°F).
- If stock in house, the valve should open and close every three month.
- To make sure no heavy loading on valve when transported and being stocked.
- It is better to install lined butterfly valve in vertical position and make the actuator directly installed in the upside of butterfly valve, generally no inversion installed.
- Lined butterfly valve when connected to check valve or pump, an expansion joint will be needed to make sure the adjacent equipment won't be affected.
- When install the lined butterfly valve, the pipe should focus on center, and it will lead the disc external diameter impacting the inner diameter of pipe, causing the damage of disc edge, resulting in the torque increasing and causing leaking.

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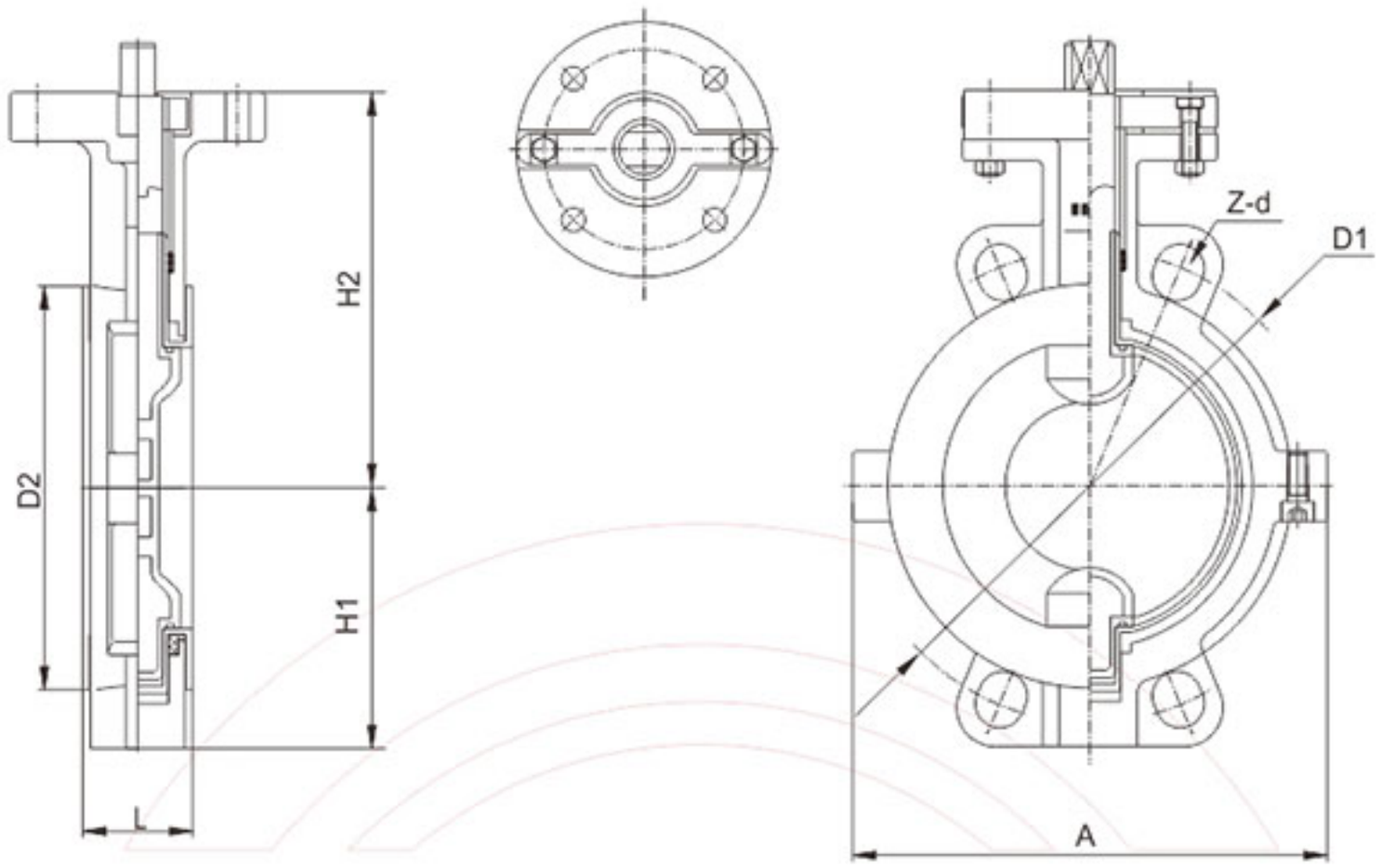

YFM-GD71PFA/F46/GXPO

HG/T 20592/ ASME B16.5

单位Unit:mm

DN	NPS	L	PN10		PN16		Class150		D2	H1	H2	A
			D1	Z-d	D1	Z-d	D1	Z-d				
50	2	43	125	4-18	125	4-18	120.5	4-19	94	70	112	130
65	2½	46	145	4-18	145	4-18	139.5	4-19	110	80	125	150
80	3	46	160	8-18	160	8-18	152.5	4-19	128	89	135	160
100	4	52	180	8-18	180	8-18	190.5	8-19	149	105.5	142	180
125	5	56	210	8-18	210	8-18	216	8-22	179	121	165	215
150	6	56	240	8-22	240	8-22	241.5	8-22	202	145	180	242
200	8	60	295	8-22	295	12-22	298.5	8-22	256	177	228	295
250	10	68	350	12-22	355	12-26	362	12-25	308	205	278	356
300	12	78	400	12-22	410	12-26	432	12-25	365	235	295	405
350	14	78	460	16-22	470	16-26	476	12-29	415	260	341	466
400	16	102	515	16-26	525	16-30	540	16-29	470	299	390	495
450	18	114	565	20-26	585	20-30	578	16-32	518	320	442	630
500	20	127	620	20-26	650	20-33	635	20-32	565	352.5	470	670

注：更多尺寸，请联系有氟密工程师。