



DQHF46 系列

衬氟蝶阀使用说明书

DQHF46 Series Fluorine Lined Butterfly Valve Manual



太原太航德克森自控工程股份有限公司

Taiyuan Taihang Dirksen Autocontrol Engineering Co., Ltd.



一、概述

衬氟蝶阀采用对分两片阀体组合,阀座与阀体内衬一体化,阀门工作时,只有全塑阀座与衬塑蝶板与介质接触,产品可承受“除熔融碱金属和元素氟”外的任何介质腐蚀。其中蝶阀阀杆与蝶板(锻)为一体,表面均匀包覆一层 FEP。阀体通道内表面光滑,流体阻力小,Kv 值高,流通能力强,扭矩适中。采用四级密封结构并在密封面外配以耐温抗老化的硅橡胶的弹性衬垫阀座,完全达到介质的零泄漏。

1、 Introduction

The fluorine lined butterfly valve adopts a combination of two parts of the valve body, the valve seat and the valve liner are integrated, and when the valve is working, only the full-plastic valve seat and the plastic lined butterfly plate are in contact with the medium, and the product can withstand any medium corrosion except molten alkali metal and elemental fluorine. The butterfly valve stem and the butterfly plate (forging) are integrated, and the surface is uniformly coated with a layer of FEP. The valve body channel has smooth inner surface, low fluid resistance, high Kv value, strong flow capacity and moderate torque. The four-stage sealing structure is adopted and the elastic liner seat of silicone rubber with temperature resistance and aging resistance is equipped outside the sealing surface to completely achieve zero leakage of the medium.



图 1 衬氟蝶阀

Fig. 1 Fluorine lined butterfly valve

1、中线蝶阀为整个蝶板与阀座在 360°圆周内同心(中线),具有双向密封功能,压力、流量可自由调节。

2、偏心蝶阀为二维方向偏心产生的凸轮效应会使密封副产生足够的密封比压,并且随着工作压力的升高,密封副产生足够的密封比压,并且随着工作压力的升高,密封效果更理想。

3、四级加载弹性密封,绝对保证了阀门内、外的零泄漏。

4、采用可调性弹子定位,定位准确,结构简单。

1、The center line butterfly valve is the whole butterfly plate and the seat in 360° circumference concentric (center line), with two-way sealing function, pressure, flow can be freely adjusted.

2、Eccentric butterfly valve for the two-dimensional direction eccentric CAM effect will make the sealing pair produce enough sealing pressure, and with the increase of the working pressure, the sealing pair produce enough sealing pressure, and with the increase of working pressure, the sealing effect is



more ideal.

3、 Four-stage loading elastic seal, absolutely ensure the valve inside and outside zero leakage.

4、 Using adjustable pin positioning, accurate positioning, simple structure.

二、主要技术参数

本阀门是按照 GB/T 26144 的规定设计、制造的，适用于温度 $-29^{\circ}\text{C}\sim 180^{\circ}\text{C}$ 的强酸、强碱类介质。在管路系统中作启闭装置用，并能确保在工作压力下有良好的密封性能。

公称压力：

1、公称压力：PN1.6MPa 、PN1.0MPa

2、温度： 介质温度 $-29^{\circ}\text{C}\sim 180^{\circ}\text{C}$

环境温度 一般为 $-20^{\circ}\text{C}\sim +80^{\circ}\text{C}$

特殊为 $-40^{\circ}\text{C}\sim +150^{\circ}\text{C}$

3、转角行程： 90° 。

2、 Specifications

The valve is designed and manufactured in accordance with the provisions of GB/T 26144, which is suitable for strong acid and alkali medium with temperature of $-29^{\circ}\text{C}\sim 180^{\circ}\text{C}$. It is used as a opening and closing device in pipeline system, and can ensure good sealing performance under working pressure.

Nominal pressure:



- 1、Nominal pressure: PN1.6MPa, PN1.0MPa
- 2、Temperature: medium temperature $-29^{\circ}\text{C} \sim 180^{\circ}\text{C}$
The ambient temperature is generally $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$
Special range: $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$
- 3、Angle travel: 90° .

三、主要结构及工作原理

衬氟蝶阀结构为中线密封式，阀杆与蝶板融为一体，蝶板旋转 90° ，即可实现阀门的启闭过程。中线密封蝶阀为整个蝶板与阀座在 360° 圆周内同心，具有双向密封性能，压力、流量可自由调节。

蝶阀体积小、重量轻、结构紧凑，与同参数闸阀相比，重量减轻约 $35\% \sim 60\%$ 。蝶阀可承受相应衬里材料的介质腐蚀，采用四级密封结构，并在密封面处配以特殊橡胶的弹性衬垫，密封性能好。轴端、蝶板圆周连接处采用特殊凹槽与特殊 O 型圈组合密封，防止介质外泄，达到了零泄漏。

可配置气动、电动、液动等多种驱动装置，实现远距离控制和自动化操作。

3、 The main structure and working principle

The structure of fluorine lined butterfly valve is the middle line sealing type, the stem and the butterfly plate are integrated, the butterfly plate rotates 90 degrees to open and close the valve. The butterfly valve is concentric for the whole butterfly plate and the seat in a 360° circle, with two-way sealing performance, and the pressure and flow can be freely adjusted.



Butterfly valve small size, light weight, compact structure, compared with the same parameter gate valve, weight reduction of about 35% ~ 60%. The butterfly valve can withstand the medium corrosion of the corresponding lining material, adopts a four-stage sealing structure, and is equipped with a special rubber elastic liner at the sealing surface, and has good sealing performance. The joint of the shaft end and the circle of the butterfly plate is sealed with special grooves and special O-rings to prevent the leakage of the medium and achieve zero leakage.

Pneumatic, electric, hydraulic and other driving devices can be configured to achieve remote control and automatic operation.

四、主要零件材料

4、The main parts materials

表 1 零件材料表

Table 1 Parts material

序号 Ordinal number	零件名称 Name of parts	碳钢 Carbon steel	不锈钢 Stainless steel
1	上下阀体 Body	WCB	CF8
2	衬里层/阀座 Seat	F4、PFA、F46	F4、PFA、F46
3	蝶板/阀杆 Disc/stem	WCB	CF8



4	填料压盖 Stuffing box gland	WCB	CF8
5	填料 Packing	PTFE	PTFE

五、标准规范

5、Standard specifications

表 2 标准规范表

Table 2 Standard specification table

设计标准 Design criterion	GB/T26144/GB12 23/API609	法兰尺寸标准 Flange size standard	HG20592、ANSI B16.5
结构长度 Structure length	GB12221/API609	检验标准 Inspection standard	JB/T13927/API598

六、保管、安装、使用和维护

1、阀门未使用时，应将蝶板处于微开启状态，阀门应整齐地存放在通风、干燥的仓库内，严禁堆置和露天存放。阀门两端应用堵盖封口，以防灰尘、杂质进入阀门内部。

2、阀门安装前，应仔细核对阀门标志及合格证是否符合使用要求，确认无误后方可进行安装。安装过程中不允许将两端氟密封面损伤。

3、清洁管道系统，防止杂质对蝶阀的影响。

4、当衬里阀门与衬里管道相连接时，一般不加垫片。如果与金属材



料的管件相连接时，应采用适当的垫片。

5、阀门在使用中，仅作全开或全关使用，不宜作调节流量用，不允许在负压的工况下使用阀门。

6、不要超过蝶阀的额定工作压力范围，以免造成损坏或危险。

7、定期检查蝶阀的密封性能，如有泄漏请及时处理。

8、避免在高温或高压下开启蝶阀，以防发生意外。

6、 Storage, installation, use and maintenance

1、 When the valve is not in use, the disc should be in a micro-open state, and the valve should be neatly stored in a ventilated and dry warehouse, and it is strictly prohibited to pile and store in the open air. Both ends of the valve should be sealed with a plug cover to prevent dust and impurities from entering the valve.

2、 Before the valve installation, should carefully check whether the valve mark and certificate meet the requirements of use, confirm the error before installation. Do not damage the fluorine sealing covers at both ends during installation.

3、 Clean the pipeline system to prevent the impact of impurities on the butterfly valve.

4、 When the lining valve and the lining pipe are connected, generally do not add gaskets. If connected with metal pipe fittings, appropriate gaskets should be used.

5、 The valve in use, only fully open or fully closed use, not suitable for



regulating the flow, not allowed to use the valve under negative pressure conditions.

6、 Do not exceed the rated working pressure range of the butterfly valve, so as to avoid damage or danger.

7、 Regularly check the sealing performance of the butterfly valve, if there is leakage, please deal with it in time.

8、 Avoid opening the butterfly valve at high temperature or high pressure to prevent accidents.

太原太航德克森自控工程股份有限公司

地址：山西·太原市晋善街 43 号

服务专线：400-800-1819

电话：0351-7058194、7054664、7058124

E-mail: dirksen@vip.sina.com

网址： <http://www.dirksen.cn>

Taiyuan Taihang Dirksen Automation Engineering Co., LTD

Add: No.43 Jinshan Street, Taiyuan City, Shanxi Province

Service hotline: 400-800-1819

Tel: 0351-7058194, 7054664, 7058124

E-mail: dirksen@vip.sina.com

Website: <http://www.dirksen.cn>