



**JDV CONTROL VALVES CO., LTD.**

Technology For The Professionals.

**JDV CONTROL VALVES CO.,LTD.**

**Installation, Operation and Maintenance**

**Triple Offset High  
Performance Butterfly Valve**

**JTE-M SERIES**

VERSION: V 1.0

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**Triple Offset High Performance Butterfly Valve  
JTE-M**

**Instructions for Installation, Operation and Maintenance**

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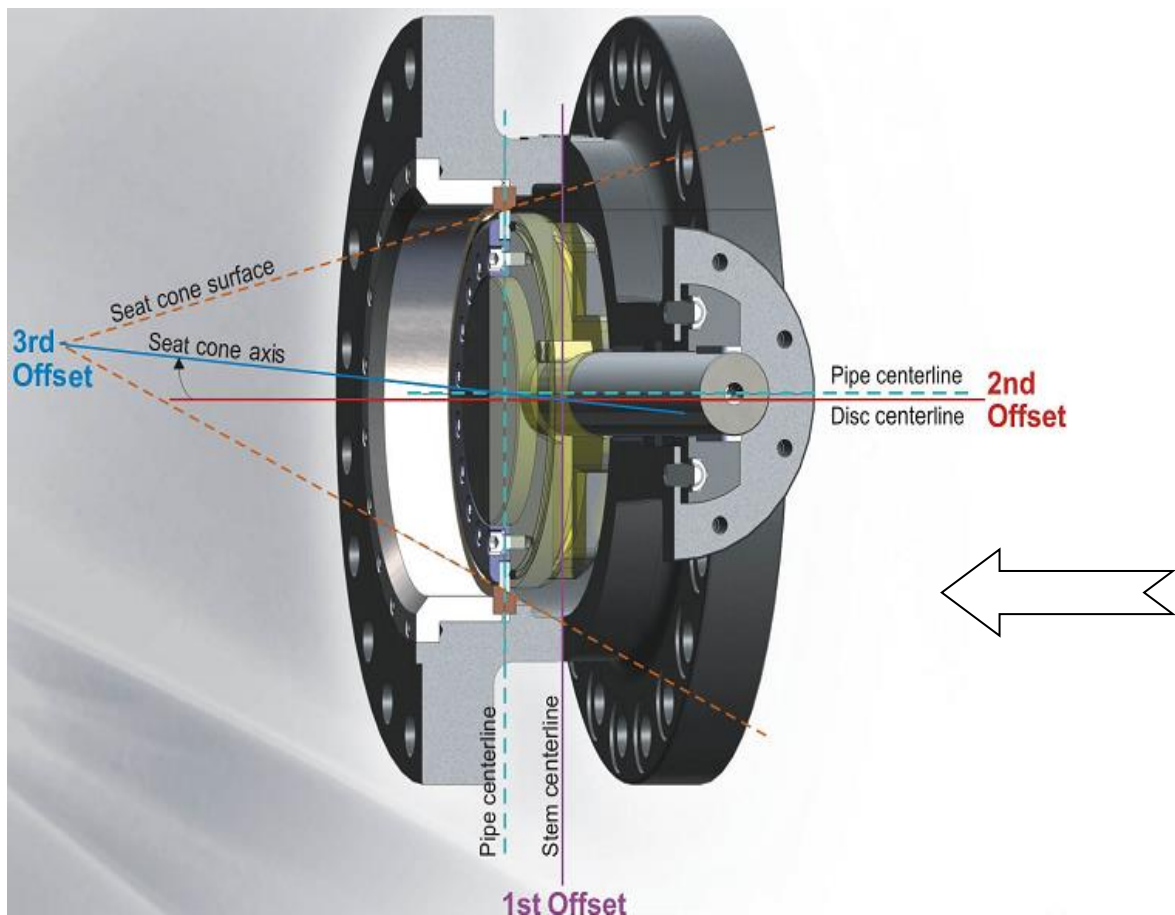


## Overview

### 1. Triple Offset High Performance Butterfly Valve

The feature of the JTE serials is triple offset, the gradual contact point, an innovative dual bevel seat, self-adjust seal system and the metal to metal seal is special feature for our butterfly valve. Particularly, it is designed specially to use on high temperature, high pressure and extreme grinding media conditions, providing unparalleled function and zero leakage properties, to meet the most demanding conditions.

Triple offset butterfly valve







## Notes prior to Use

1. Read the instructions for installation, operation, maintenance carefully before operating the product.
2. Identify the warning banners and descriptions mentioned in this document.
3. Please put the instructions for installation, operation, maintenance in an easy access site in order for query in use.



Warning Banners:

<b>Banner</b>		
<b>Description</b>	This indicates a dangerous situation. Slight or moderate injury might be resulted if it is not averted.	Death or severe injury might be resulted if such potential dangerous situation is not averted.

## Safety Notification:

Design engineers or product users identify basic product specifications and check the compliance of valve and installation equipment in order to guarantee safe use.

Prior to installation of valve, the compliance of operating conditions (temperature, pressure, fluid characteristics, ambient conditions, installation gauges etc.) with the service conditions set for valve has to be checked and identified.

	<p><b>Warning:</b> Do not get beyond the limitation indicated by valve specification or technical parameters, or otherwise, death or severe injury might be resulted.</p>
	<p><b>Caution:</b> Valve may be used indoors or outdoors. If it is exposed to atmospheric environment, erosion of valve has to be cared, or otherwise, slight or moderate injury might be resulted.</p>





## Product Transportation/Storage/Maintenance

\* The product has to be packed well to avoid unnecessary damage when transportation to and storage in warehouse. Particularly, the following precautionary measures have to be cared:

### Warning:

1. In moving or transportation, suitable tools have to be selected for correct equipments and accessories (sling, fastener, hook and so forth) in terms of size with consideration of individual weights of details in the package and the complete total weight.
2. Butterfly valve lifting and handling should be operated by qualified operators. Inappropriate lifting would result in deformation or dropping of valve to damage the valve.
3. Do not lift the valve using the suspending point or bracket arranged on cylinder to prevent from danger.
4. Do not use the handle of the manual valve to take or lift Butterfly valve. In such a way, the handle of the manual valve would fractured or depart from the valve, such that damage or human injury might be resulted.
5. Do not use the handwheel of the gearbox of the manual valve to take or lift butterfly valve. In such a way, the handwheel of the gearbox would fractured or depart from the valve, such that damage of human injury might be resulted.





## Transportation

1. The openings on two sides of the butterfly valve have to be protected well using appropriate sealing cover in order to guarantee clean interior of the valve and prevent foreign objects from entry.
2. The packaging has to guarantee safe transportation to storage site. As arrival to the storage site, please identify that the covering material or packing paper or wooden case keeps in a complete status.
3. Before the butterfly valve is conveyed, check whether the GLAND PACKING(16)loaded or not. The position of the center shaft packing must be adjusted. GLAND NUT (24) must be adjusted. GLAND (10) really compress the packing.

## Storage

### Preserving of Packed Butterfly Valve

1. The customer order must be display on the package clearly, and to be sure the valve have been delivered to customer safely and storage place after installation. The packing paper and sponge material must be reserve with product until installation.
2. Wooden box: The valve needs to package with the wooden box before use it, and put polyethylene foam sheet or some suitable isolate in the wooden box to separate the valve. Keep the original wooden box and store it preferably in indoor. So that it can avoid damaging the seat, the disc sealing face, and flange face, when operate the valve on the unpacking condition.
3. Paper box: Putting the valve in the paper box need to be careful, the warning notes has to display on the box outside, and to use the pallets timely.
4. Protect the pack adequately to prevent the pack from damage.
5. There should be warning banners for packs to guarantee that the moving of product would not result in unnecessary damage, such as suspending hanging center of gravity.
6. Flange surface and channel opening have to be protected on the surfaces of two sides of the butterfly valve using adequate sealing patch or cover to guarantee clean interior in the valve and prevent foreign objects from entry.



7. If the used material of the valve is prone to rust, the flange surface and the channel opening have to be coated with antirust oil in order for preventing rust spots from appearing.
8. Valves shipped with mounted actuators shall be packaged to prevent damage during transit.
9. When export packaging is specified in the purchase order, valves shall be shipped in wooden boxes or crates, individually or collectively, in a manner that will prevent shifting within the package.
10. When export packaging is specified in the purchase order, valves shall be shipped in wooden boxes or crates, individually or collectively, in a manner that will prevent shifting within The packin

## Preserving of non-packed/unpacked ball valve butterfly valve



1. To handle un-packed valve, it need to add outside protect measure to prevent the surface damage of butterfly valve.
2. During the move, please use pallets to move the valve that unpackaged with wood box.
3. treating large valve, the product has to be fixed safely and stably. Suitable tools (bracket, hook, fastener, cable) should be used in transportation. In moving, balance has to be kept in order to prevent product from damage due to dropping or shaking in transportation process.
4. The storage site has to keep clean and dry.
5. Do not let the product to be exposed to wind/rain or to be sunned.
6. Please check preserving status regularly if the product is to be stored for a period of time.

## Maintenance

The product has to be packed well to avoid unnecessary damage when transportation to and storage in warehouse. Particularly, the following precautionary measures have to be cared:

1. The flange seal surface (flange face) should be protected with suitable oil.
2. The end face of the valve should be protected with suitable seal disc (made from plastic or wood)

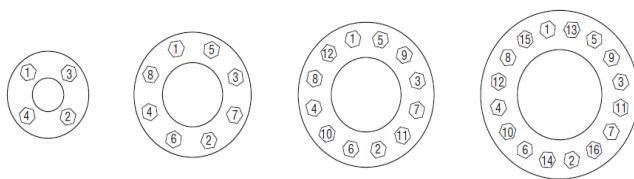


3. The bare stem butterfly valve and the end of the stem of such a bare stem butterfly valve should be protected with a plastic pipe.

## Attention

In order to be sure safety, please follow the under instructions before install, move and disassemble the valve.

1. Please do not use excessive the design pressure of the valve to operate the valve.
2. Please do not use excessive the design temperature of the valve to operate the valve.
3. Be sure the pipe can become a straight line in the reasonable support condition, do not recommend to install the valve on two sides which has deviation angle, easy to cause leakage.
4. Before dangle or disassemble the butterfly valve, be sure the valve is fully closed.
5. Before install pipe, confirming the flange face has been cleaned.
6. Please refer to the flow direction arrow on the side of the valve before install the valve. To avoid
7. the damage when install the valve. When install the valve on the pipeline, tighten the screws in diagonal sequence evenly as show
8. below. Do not over tighten the screws of any side that will cause easily leads to leakage.



tightening sequence

9. When deal with the pressure test, please check whether leakage between flange and gland packing.





## Inspect

1. After install the valve in the pipe system, check the valve with eyes, to make sure the valve is not damage during transport. Check the operation mechanism of the vale, particularly on stem, inside, body and flange. During the normal operation, the seat and seal ring have to remain intact, no foreign material. If any damage is found, Please contact JDV immediately and describe the degree of damage and location.
2. Please use soft cloth and mineral oil or equivalent means if need to clean the valve. The antirust material on the valve is all cleared before install the valve.





## Notes for installing

1. During the installation, maintain at least 6 times the length of the pipe fittings, for example, elbow, pump outlet, and valve, etc. If the condition of installation not be allowed, please provide as the installation distance as possible and do not install the valve direct to the outlet or inlet of pipe fittings as describe above, except as terminal end valve or discharge valve.
2. Welding the pairing flange must be build up on the precise location, and make sure to make the end face of flange parallel to each other. Recommend to use the short pipe to be used on the flanges to align the end face of flange with each other, and reserve a suitable installation space.



Do not weld the pairing flange that have been paired and installed. During weld procidure, do not use the vavle as tools to align the flange end-face. This operation will lead to damage the seat permanently, and impair the valve .

3. The surface of pipeline and flange must be clean, do not leave any foreign material, for example, pipe scrap, metal scrap, welding dross, welding head, solder rod, etc., that will disrupt the action of the valve and damage the seat. Thus, the only reasonable approach is clean the pipeline after the valve is installed.
4. Adjust the pipeline and increase the space of pairing flange, so that install the valve esaily. Use a pair of screws with bolt and nut (like leverage) to increse the space of pairing flange if is needed.
5. In order to achieve the perfect seal between the valve and the pairing flange, need to provide and put the suitable flange gasket on the contacting face between the two side of valve and the pairing flange when installation. According to the operation condition and the characteristic of medium, user need to select the suitable material for the gasket.
6. Before put the valve on the bewteen flanges, need to turn the valve in the fully closed poistion. In order to prevent the seal surface of the disc is scratched.





7. The body of the valve have provide a arrow mark that indicates the direction of flow. Check the direction of medium in linem, make sure following the direction of flow to install the valve.



Attention: when actuator install on the valve, the actuator cannot be perpendicular to ground.

8. Valve switch position indication

Bare Valve: Valve Shaft Key

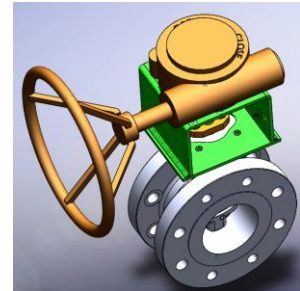
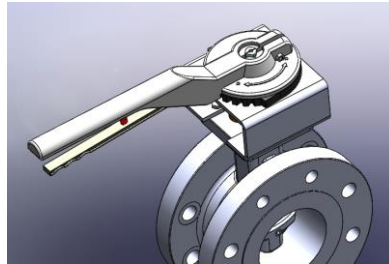
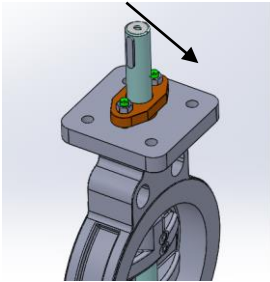
handle: Handle parallel to the disc

manual gearbox

Parallel to Disc Plate

(mark OPEN/CLOSE)

(mark OPEN/CLOSE)



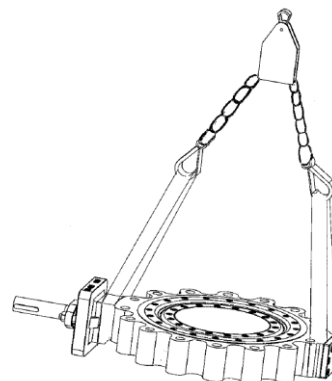
9. If the diameter of butterfly valve have not less than 350mm, recommending the handle of the valve that was installed is parallel (in-line) with the valve or pipeline.

10. If the diameter of butterfly valve greater than 600mm (24 inch), recommend installing the support frame.



## Notes for hanging position

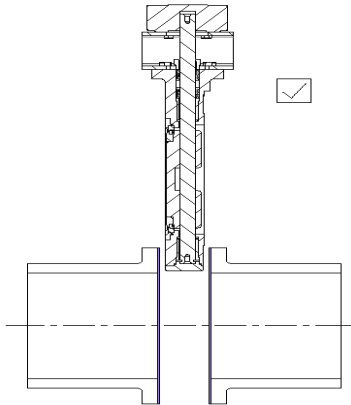
1. Use suitable mechanism to hang the valve.
2. The chain, sling, and lifting should be carry out regular checks.
3. Do not try to hang the valve by use the gearbox handwheel, actuator and other accessories.
4. When hang the valve, the chain or sling should be tightened around the valve.
5. The lug and ring should be used when hang the valve.
6. The valve should be in the closed position when operation.





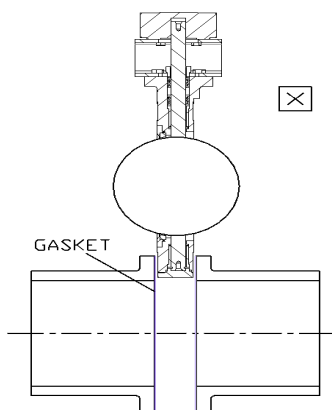
## JTE-M Series installation, operation and maintenance

### ● Installing on pipe



#### right installation

The body of valve and the flange maintain safe distance and the disc is in the closed position.



#### error installation



If the opened disc exceed the body of valve and is too close the flange, the seal system could cause damage easily.

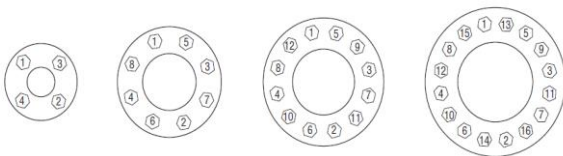


## ● Installation

Put on the valve between the pairing flanges, and put the flange gasket on the both side of the valve. To position the valve, need to use the lug or the valve neck to fix the valve. Do not use the fixed actuator or the operation mechanism that setted up the top bracket of butterfly valve to support the valve.

Put on the valve between the flanges. Put the double head bolts and nuts into the upper and lower lug holes position and locked. Than insert all the double head bolts and nuts into the rest of lug holes of valve and locked. Slowly turn the valve to the fully open position, and then turn to close position. Make sure the disc does not interfere with the nearest pipe.

Turn the vavle to fully open position and tighten all bolts and nuts. Nuts have been tightened in diagonal sequence as showed below. Rotate the valve back and forth to make sure the valve smooth.



tightening sequence

The Lug butterfly valve and the Wafer butterfly valve use the same mounting method except for the fasteners.

The wafer type and Lug type have same fasten method that lug type butterfly valve has to pass through the lughole completely by double head bolts or nuts. Short bolt have to pass though the other side of butterfly valve with thread lughole.



Notes: the designed butterfly valve does not apply to the end of pipe.



### ● operating limit

Recommend the performance butterfly valve do not use the liquid flow rate exceeds 4m/s or the air flow rate exceeds 30m/s. Please be sure the flow rate is lower than the limit above.

When the valve is used for adjusting, is limited the full open position, provided that maximum pressure drop is the 30% inlet pressure.

### ● operation

Turn the valve to close or open by the disc which can rotate from 0 to 90 degree. Usually, clockwise represents the valve have opened and counter-clockwise represents the valve have closed.

### ● operating models

The JDV butterfly valves apply to any actuator following:

1. hand lever
2. manual gearbox
3. pneumatic actuator or pneumatic actuator with handwheel
4. electric actuator or electric actuator with handwheel

### ● Removal procedure

To remove the valve from the pipeline, follow these steps:

1. Ensure the valve is in the fully closed position
2. Ensure that the system is depressurized
3. Ensure that the actuator is disconnected from the power or air supply.

Then remove the operating part of the butterfly valve (handle, gear box, pneumatic actuator or electric actuator).

Check that the valve pipe system is closed before removing the valve. When hanging the valve, the chain or sling should be fixed around the valve body, and then remove the flange bolt.



## Structure/ maintain and repair

### Technical Specifications

#### STANDARD MATERIALS

NO	PART NAME	SM		SH	
		-20~572 °F (-29~300 °C)	A351-CF8M	-20~797 °F (-29~425 °C)	-20~932 °F (-29~500 °C)
1	BODY	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
2	DISC	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
3	STEM	A564-630(HH1150)	A276-XM-19	A276-XM-19/S66286	A276-XM-19/S66286
4	SEAT	A182-F304+HARD FACE	A182-F316+HARD FACE	A182-F304+HARD FACE	A182-F316+HARD FACE
5	BODY RETAINER	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
6	DISC RETAINER	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
7	DISC GASKET	GRAPHITE+316SS	GRAPHITE+316SS	GRAPHITE+316SS	GRAPHITE+316SS
8	SEAL RING	A182-F51+HARD FACE		S66206+HARD FACE	
9	BODY GASKET	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
10	GLAND	A351-CF8	A351-CF8	A351-CF8	A351-CF8
11	GLAND BEARING	A240-316+PTFE		A240-316+HARD FACE	
12	STEM BUSHING	A276-316	A276-316	A276-316+HARD FACE	A276-316+HARD FACE
13	STEM RING SEAL	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
14	THRUST BEARING	TFE/COMPOSITE	TFE/COMPOSITE	N.A.	N.A.
15	THRUST WASHER	A240-316+HARD FACE	A240-316+HARD FACE	A240-316+HARD FACE	A240-316+HARD FACE
16	GLAND PACKING	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
17	END COVER	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
18	COVER GASKET	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
19	PIN	A664-630 (HH1150)	A276-XM-19	A276-XM-19/S66286	A276-XM-19/S66286
20	KEY	AISI-1045	AISI-1045	AISI-1045	AISI-1045
21	STEM RING	A276-316+HARD FACE	A276-316+HARD FACE	A276-316+HARD FACE	A276-316+HARD FACE
22	BRACKET	A240-304	A240-304	A240-304	A240-304
23	GLAND BOLT	A193-B8	A193-B8	A193-B8	A193-B8
24	GLAND NUT	A194-8	A194-8	A194-8	A194-8
25	BODY RETAINER SCREW	A193-B8	A193-B8	A193-B8M	A193-B8M
26	DISC RETAINER SCREW	A193-B8	A193-B8	A193-B8M	A193-B8M
27	BRACKET SCREW	A193-B8	A193-B8	A193-B8	A193-B8
28	END COVER SCREW	A193-B8	A193-B8	A193-B8	A193-B8
※	MO (1)	HANDLE/GEAR BOX			

The above materials may be changed with different using conditions.







## Regular maintain and trouble shooting

area	problem	solution
interior	Seal face of SEAT leak	Determining SEAT (4) if has scratch or deformation and please follow 4.6.2 to replace it if has. Determining SEAL RING (8) if has scratch or deformation and please follow 4.7.3 to replace it if has.
	DISC GASKET leak	Tighten DISC RETAINER SCREW (26), if it is still leak please follow 4.6.3 to replace DISC GASKET (7).
exterior	Stem leak	Tighten GLAND NUT (24), if it is still leak please follow 4.6.1 to replace GLAND PACKING (16).
	Bottom leak	Tighten END COVER SCREW (28), if it is still leak please follow 4.6.4 to replace.



\*recommend spare parts.

DISC GASKET , BODY GASKET , GLAND PACKING , COVER GASKET...etc.,

If the solution above never deal with the problem or other problem except above, please contact JDV.



## Maintain and repair

	<p><b>Warning:</b></p> <p>1. All harmful substances have to be guaranteed to be cleaned completely.</p>
	<p><b>Caution:</b></p> <p>1. Disassembling product has to be operated by qualified operators.</p> <p>2. Contact with JDV is recommended for maintaining and disassembling the product in order to avoid danger due to incorrect disassembling and assemblage.</p>

Because many design can reduce the damage for seat and reduce the maintain/repair work. there is no need for routine maintenance of high-performance butterfly valves.. On it own, the normal repair not required unless adjust GALND (10) of GLAND PARKING (16) sometime.

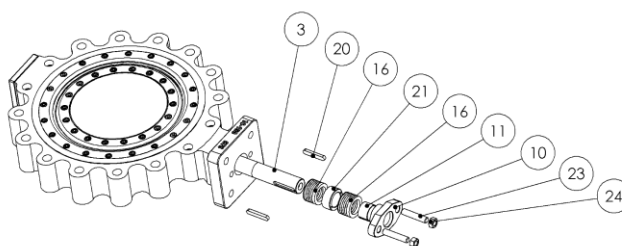
The valve have to take off from the pipeline (the disc is in all close position) and use blind flange to close the end of a pipe if need to change the part of the valve, or use the short pipe insert the release position of valve, use the double bolt to expend the gap of flange so that easily to release valve.



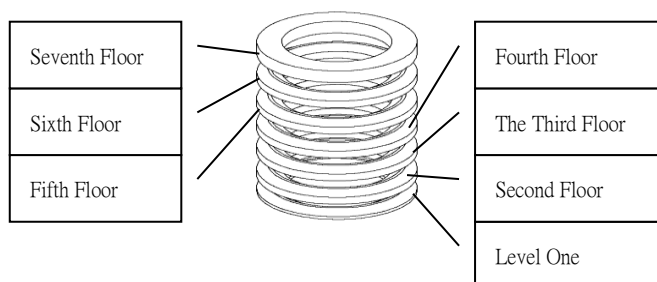
## Change and install the spare parts

### Change GLAND PACKING (16)

Use open wrench to loose and remove GLAND NUT (24) and GLAND BOLT (23), after take off GLAND (10) and GLAND BEARING (11), dig the damaged GLAND PAKCING and replace it with new.



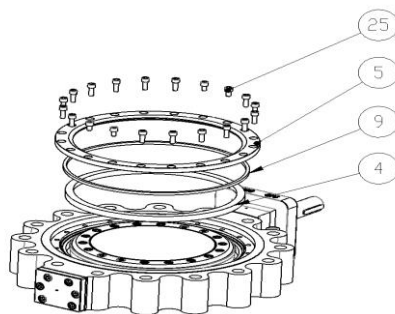
Change and replace new GLAND PACKING, referring the figure as showed below to sequential put GLAND PACKING (24) into the upper packing area smoothly and equally. Install GLAND BEARING (11) and GLAND (10) orderly, finally to screw GLAND BOLT (23) and GLAND NUT (24) to complete installation process.



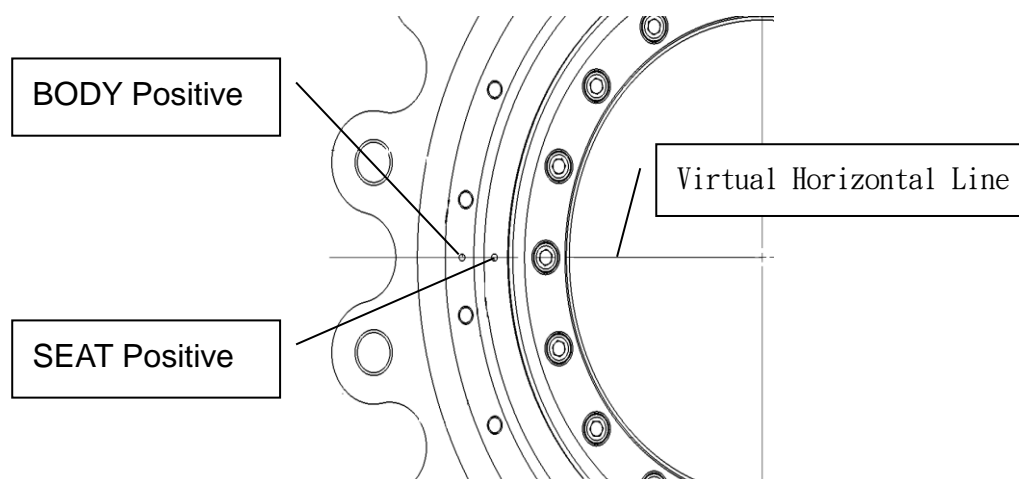


### Change the BODY GASKET(9) 、SEAT(4):

After remove BODY RETAINER SCREW (25), BODY RETAINER (5), replace BODY (9) and SEAT (4) in field.



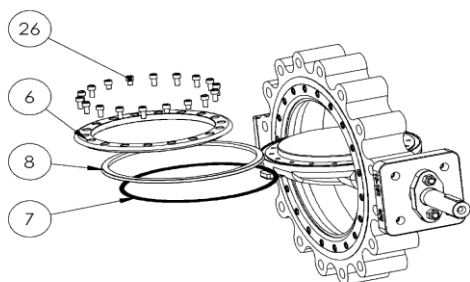
After replace the old SEAT (4), put new SEAT (4) into BODY, align the alignment point of SEAT (4) and BODY (1) of SEAT (4) to the virtual line roughly. After correctly identify the alignment, put on BODY RETAINER (5) and tighten BODY RETAINER SCREW (25) in diagonal sequence, than finish the replace procedure. Be sure the side face of SEAT (4) need to conform the contact face of SEAT (4) of BODY (1) without warpage, any contaminants not leave in the sealing surface of SEAT (4) that can avoid scratching SEAT (4).



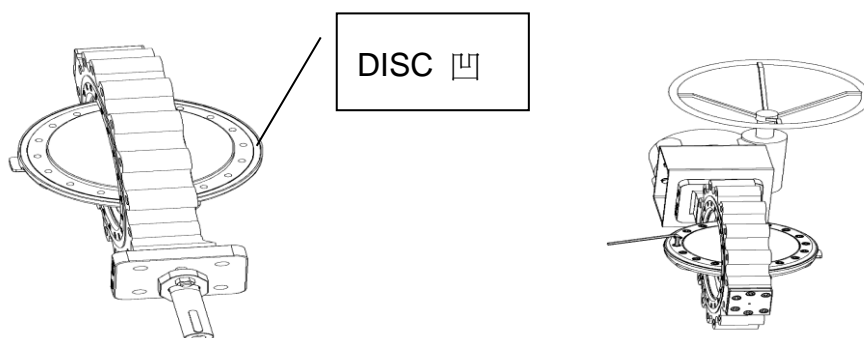


### Change the SEAL RING (8) and DISC GASKET (4)

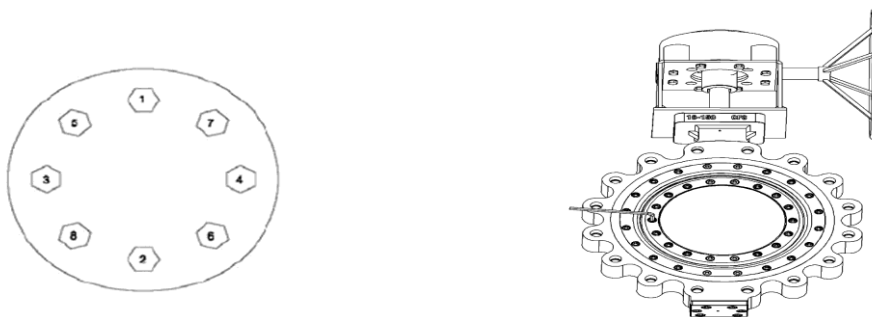
First, loose the DISC RETAINER SCREW (26) with wrench slightly, turn the DISC (2) to 90 degree, take out the loosed DISC RETAINER SCREW (26) fully with wrench, and take out DISC RETAINER (6) and SEAL RING (8) that being careful to avoid damaging SEAT (4) during take out it. Finally, take out DISC GASKET (7).



Put the new DISC GASKET (7) into the slot of the DISC (4), and put on the SEAL RING carefully, and Last, put on the DISC RETAINER (6) and DISC RETAINER SCREW (26), use hex wrench to screw slightly the DISC RETAINER SCREW (26) in diagonal sequence as show below.



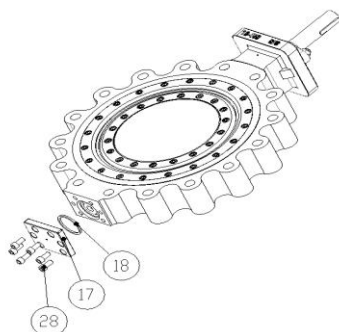
Rotate the DISC (2) 0 degree by actuator (need to identify actually contacting between SEAT (4) and SEAL RING (8) and to secure stopping leakage in the sealing surface), tighten DISC RETAINER SCREW (26) in diagonal sequence as showed below and complete the replace process.



tightening sequence

### Change COVER GASKET (18)

Use hex wrench to loose and take off END COVER SCREW (28), remove END COVER (17), and take out COVER GASKET (18) and replace it.



Put new COVER GASKET (18) into the bottom packing area of BODY smoothly, put into END COVER (18), and use hex wrench to screw END COVER SCREW (28) in diagonal sequence to complete the replace process.



## **Completing and determining the assembly process**



Clean the metal debris and the raw material particles on the surface the SEAT (4) and SEAL RING (8). Check the valve if is installed properly, and fix the related mechanism. Fasten the bolt and nut of BODY RETAINER (5) and DISC RETAINER (6) tightly. Install the actuator on the rack. Fasten the bolt and nut tightly again, and operate the valve back and forth to watch whether the valve action is smooth and good.





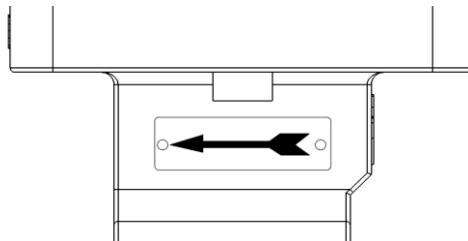
**Mark**

Nameplate

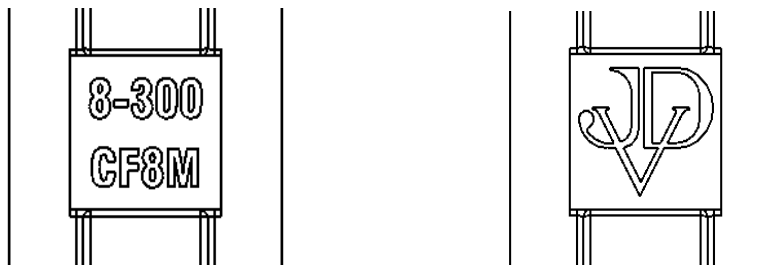
 <b>JDV CONTROL VALVES</b>  B16.34 API 0575 609B	<b>MODEL</b> JETB-C1-02-A-22				<b>BODY</b>	CF8M	⊕
	<b>SIZE</b>	24"	275 PSI @	100 °F	<b>DISC</b>	CF8M	
	<b>CLASS</b>	150LB	170 PSI @MAX	500 °F	<b>STEM</b>	XM-19+HCR	
	<b>S/N</b>	20140620001	<b>DATE</b>	2014/06/20	<b>SEAT</b>	F316+HCR	
	Not for Dead-end Service				<b>SEAL</b>	GRAPHITE	

Item	name	Example
1	MODEL	JETM-C1-02-A-22
2	SIZE	24"
3	CLASS	150LB
4	S/N	20140620001
5	DATE	2014/06/20
6	BODY	CF8M
7	DISC	CF8M
8	STEM	XM-19+HCR
9	SEAT	F316+HCR
10	SEAL	GRAPHITE

Flow Arrow



Foundry mark







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# 進典工業股份有限公司

JDV CONTROL VALVES CO., LTD.

高性能三偏心蝶閥

安裝、操作和維護手冊

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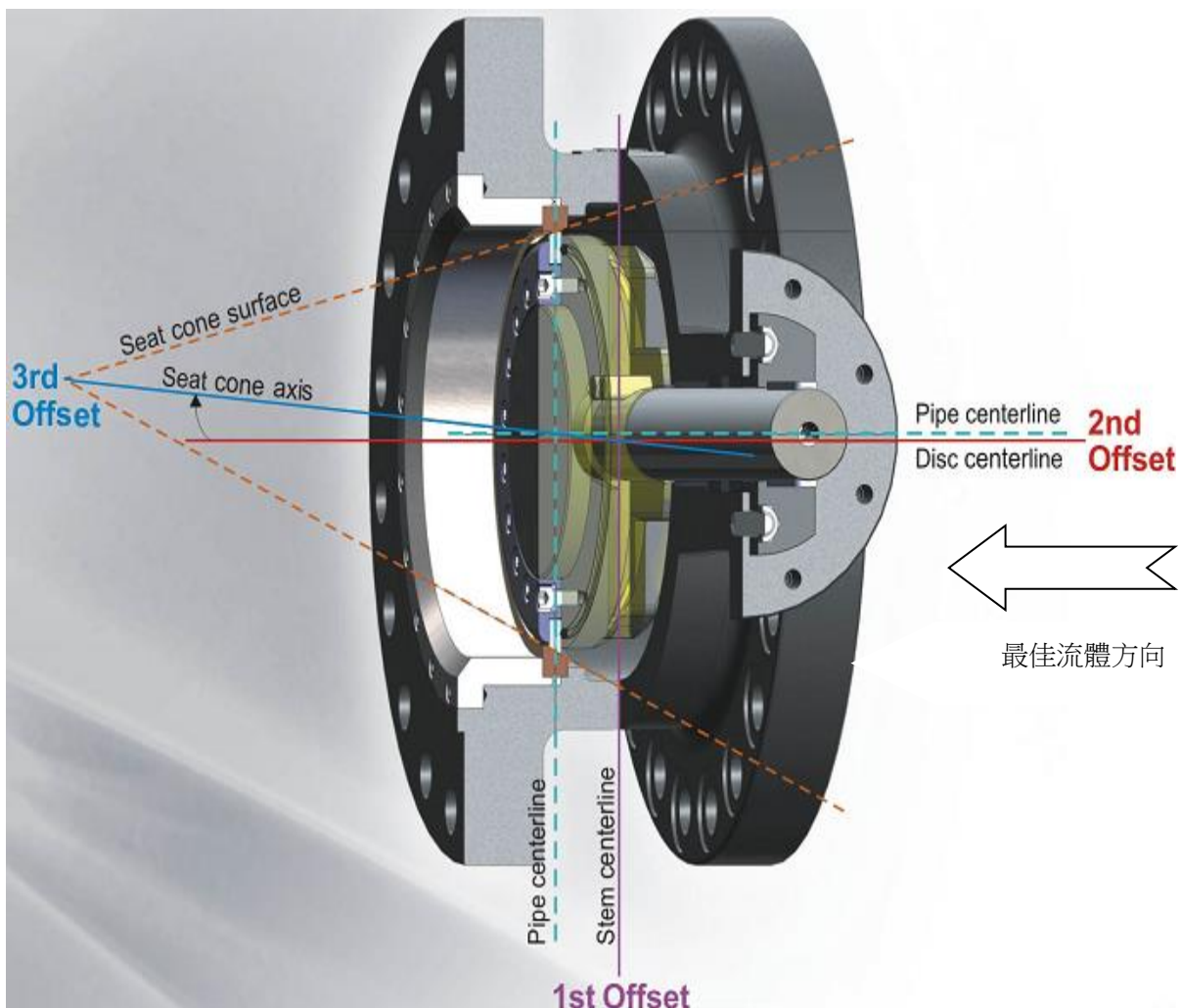
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## 概述

### 三偏心蝶閥

JTE 系列設計之特色為三重偏移、 逐步的接觸點及創新雙斜閥座錐軸、自適應的密封系統和金屬對金屬密封是我們三偏心蝶閥的獨特功能的幾個例子。它特別設計使用於高溫、 高壓降和研磨介質等極端的工作條件，提供無與倫比的性能和零洩漏能力，以滿足最苛刻的要求。



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### 使用前須知:



1. 操作產品前請仔細閱讀安裝操作維修手冊。
2. 請確認此份文件所提及之警告標誌及說明。
3. 請將安裝操作維修手冊放置於隨手可取之場所,便利查詢使用。

警告標語: 標示		
說明	危險的情況，如果不能避免， 可能導致輕微或中度損傷。	如果不能避免, 潛在的危險情況，可能 導致死亡或嚴重傷害

### 安全性告知:

由設計工程師或產品使用之負責人員做基礎的產品規格確認，並檢查閥門和安裝設備之符合性，以確保使用的安全。

在安裝閥門前，須確認檢查操作條件（溫度、壓力、流體特性、環境條件、安裝儀錶..等）是否符合閥門設定的使用工況。

	<b>警告:</b> 請不要超出閥門規格或技術參數表所示之之限值 如果不能避免，可能導致死亡或嚴重傷害
	<b>注意:</b> 閥門可用於室內或室外。如在暴露大氣環境中使用, 應注意閥門之腐蝕及 如果不能避免，可能導致輕微或中度損傷。




## 產品運送/保存/維護須知

※產品應適當包裝好, 以避免運送和存放於倉庫造成不必要損壞, 尤其請特別注意下列預防措施:

### 運送

1. 蝶閥兩側端面口必須使用適當的密封蓋保護好, 以確保閥門內部清潔及防止異物進入。
2. 包裝的型式必須確保能安全運送到存放地點, 抵達存放地點時請確認包覆材料或包裝紙或木箱保持完整狀態。

	<h2 style="text-align: center;">警告</h2> <ol style="list-style-type: none"><li>1. 移動或搬運時, 正確的設備和配件 (吊索、緊固物、掛鉤等等) 必須按尺寸選擇合適的工具, 要考慮包裝明細的個別重量和全部的總重量。</li><li>2. 吊升和處理蝶閥, 必須由符合操作資格的人操作。不適當的吊升會造成閥的變形或掉落而使閥損毀。</li><li>3. 不要使用氣缸上設置之吊點或托架吊升閥, 以免發生危險。</li><li>4. 請勿將手動閥之把手做為拿取或吊升蝶閥用, 會使手動閥之把手折斷或與閥斷開分離,</li><li>5. 可能導致毀壞或人員傷害。</li><li>6. 請勿將手動閥之齒輪箱之手輪吊升蝶閥用, 會使齒輪箱之手輪彎曲或斷裂可能導致毀壞或人員傷害。</li></ol>
---	--

3. 蝶閥運送前應確認填料有無裝入、中軸填料處須調整 GLAND NUT<sup>②4</sup>使 GLAND<sup>⑩</sup>確實壓迫填料。



## 保存

### 保存已包裝之蝶閥

1. 包裝的型式必須標示清楚客戶的訂單，而且必須確保能安全運送到客戶手上以及安裝前的存放地點。  
直到安裝之前，包裝紙和包覆材料都應該與產品保留在一起。
2. 木箱：閥門在未使用之前必須用木箱包裝，並且在木箱內要用聚乙烯泡沫片或一些適當分離物隔離閥門。  
閥門必須保留原來的包裝，最好存放在室內。這樣可以避免當未包裝條件下操作閥門時，對閥座、閥板密封面和法蘭面損壞。
3. 紙箱：閥門裝在紙箱的處理應格外謹慎進行，應在包裝紙箱額外的注明警告標語，以及適時的使用棧板。
4. 將包裝加以適當保護，以避免包裝之損壞。
5. 對於包裝應要有警語標示，以確保產品移動時造成不必要之損壞，如：吊掛重心。
6. 為避免法蘭凸緣表面受損，必須使用適當的密封貼片或封蓋保護凸緣表面與流道口。
7. 閥體材質若為易鏽件須於法蘭表面與流道口塗上防銹油，實施防護避免鏽斑產生。
8. 裝配有驅動裝置之閥門應確實包裝防止運送中損壞。
9. 如訂單規定為出口包裝外，閥門可以散裝、集中裝箱或板條箱裝運。為了防止閥門在裝運過程中損壞、應將閥門確實包裝。
10. 如訂單指定出口包裝，則閥門應單個或集中於木箱或板條箱中裝運防止閥門在箱內移動。

### 保存未包裝/已拆裝蝶閥

1. 處理未包裝閥門，從原始的包裝取出時需額外加上外部保護以防止蝶閥表面的損壞。
2. 閥門在搬運過程中，凡是未經木箱包裝的閥門，請全程使用棧板搬運。
3. 當處理大尺寸閥門時，適當的工具（托架、掛鉤、緊固物、繩索）應把閥安全地穩固好，而且吊起時要保持平衡以避免閥在操作的過程中掉落或移動，造成產品損壞。
4. 存放空間應保持乾淨，陰涼及乾燥通風。
5. 避免將包裝好的閥門暴露於風雨中或直接日曬。
6. 如果產品存放一段時間，請定期檢查產品保存狀況。



### 安裝前的維護

所有閥門應適當包裝，以避免因搬運和存放而造成損壞，尤其請特別注意下列預防措施：

1. 法蘭密封面（凸緣面）應受保護，有合適的防護油。
2. 閥的端面必須被保護以適當密封盤（用塑料、纖維板、木制圓盤或金屬製造）、並用螺栓、鋼帶、鋼箍或合適摩擦固緊方式固定至閥門端面。
3. 裸軸閥門：所述軸的端部必須用塑料管進行保護。



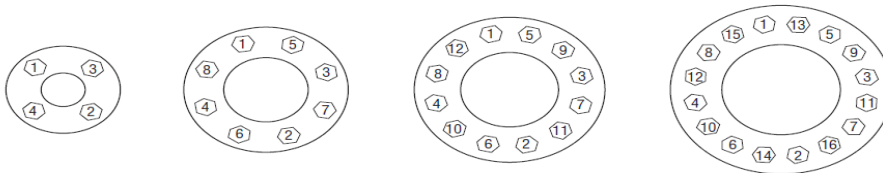
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## 注意事項

為確保安全，請按照下列注意事項在安裝之前，移動或拆卸閥門。

- 1.請不要在超過閥門設計壓力的情況下使用。
- 2.請不要在超過閥門設計溫度的情況下使用。
- 3.確認管線是在合理支撐條件下成一直線狀態,不建議將閥門安裝在左、右兩側偏差過大的管道上,易造成洩漏。
- 4.吊掛或拆卸安裝之前，請確保閥門處於完全關閉位置。
- 5.安裝管道前確保法蘭面清潔。
- 6.閥門請依閥體上的流向指示進行安裝。安裝時請避免閥門受到損傷。
- 7.閥門在安裝於管道上時,請用斜對角鎖附方式,平均鎖緊固定螺絲。需避免過度鎖緊任何一側的固定螺絲,如有此過度鎖緊狀況易造成洩漏。



斜對角鎖附方式圖示

- 8.當處理管線的壓力測試時，請檢查法蘭連接和中口部分是否有任何的洩漏。

## 檢查

- 1.閥在進入管道系統安裝之前，目視檢查閥，以確定在運輸過程中無任何損壞。

尤其是，檢查執行機構，軸，閥內部，閥體和法蘭。用於閥的正常使用时，閥座和閥密封必須完好無損，無異物。如果有發現任何損傷，請立即聯繫本公司，並說明損傷的部位和程度。

- 2.如果需要清洗閥，請用軟布和礦物油精，或等效溶劑。所有的防銹應在安裝之前被清除。



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## 3.5 安裝準備須知

1. 蝶閥安裝時，最好與彎頭、泵出口、閥門等管配件保持最小 6 倍管徑的長度。若條件不允許，請盡可能提供安裝間距離，避免將閥門直接安裝于上述管配件的入口或出口，除非是終端閥門或者卸料閥。
2. 配對法蘭片必須堆焊到準確的位置，同時法蘭片端面彼此保證平行。建議在法蘭片之間利用短管確保法蘭端面相互對準成一直線，同時預留合適的安裝間距。



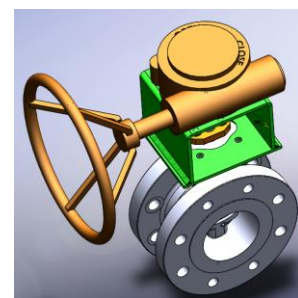
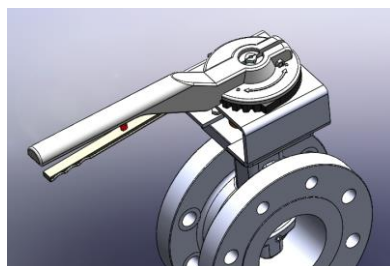
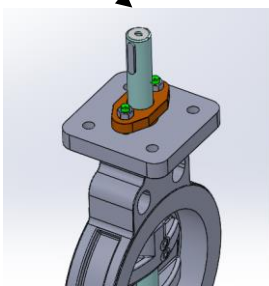
切忌對配對與已安裝的閥門的配對法蘭，執行焊接動作。在焊接過程中絕對不能把閥門作為校正法蘭端面

3. 管道和法蘭面必須是乾淨的，不帶任何外來雜質，如管道屑、金屬碎片、焊雜、凸出的焊接頭、焊條等。若以上提及的雜質存在會妨礙蝶板的活動，同時損傷閥座。在閥門安裝前，合理的做法就是對管道進行沖洗。
4. 調整管道然後增大配對法蘭片的間隙，以便能夠很容易地安放下閥門。如果有需要的情況，使用一對帶螺母的螺栓件（類似千斤頂的原理）來增大配對法蘭片間距。
5. 為了獲得閥門與配對法蘭片之間的完美密封性能，閥門安裝時必須提供和放置合適的法蘭密封墊片在閥門的兩邊與配對法蘭接觸的面上。根據操作條件和介質的特性，用戶需選擇合適材質的密封墊片。
6. 當將閥門放入配對法蘭片間安裝前，須將閥門保持在全關的狀態。防止閥門蝶板的密封面被刮傷。
7. 蝶閥閥體上提供了一個箭頭標誌指定介質的流向。在閥門安裝前檢查管線內介質的流向，確保閥門依照指示的流向進行安裝。
8. 閥門開關位置指示

裸閥: 閥軸鍵銷與碟板平行

把手: 手柄與碟板平行(標示 OPEN/CLOSE)

齒輪箱: 標示 OPEN/CLOSE



注意：執行器與閥門安裝時，執行器不能垂直於地面。

9. 當蝶閥口徑為  $\geq 350\text{MM}$ ，閥門建議安裝時，其閥杆在橫向(水平)的方位。
10. 蝶閥口徑大於 600MM (24 in)建議安裝支撐腳架。



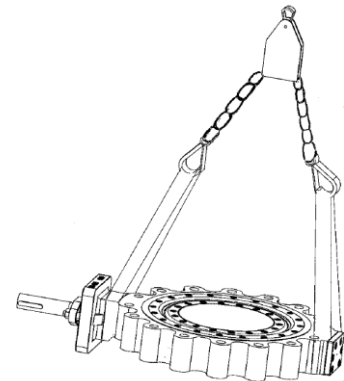


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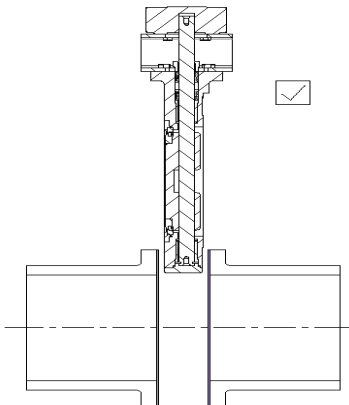
## 吊掛位置注意要點

1. 閥門應使用合適的機械設備吊掛。
2. 鏈條，吊索和其他起重設備應定期檢查。
3. 不要試圖使用閥體上的齒輪箱手輪、執行器或其它配件吊掛。
4. 吊掛閥時，鏈條或吊索應圍繞閥體固定。
5. 吊掛應使用吊耳，吊環。
6. 操作過程中閥門應處於關閉位置。



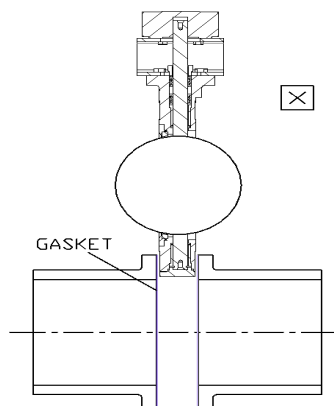
## JTE-M Series 安裝，操作和維護說明

### 4.1 管道上的安裝(閥安裝於法蘭之間)



#### 正確安裝

閥體與法蘭保持安全距離且蝶閥處於關閉位置之狀態



#### 錯誤安裝

蝶板打開超過閥體、且與法蘭距離過近，  
易造成蝶閥密封結構之損傷





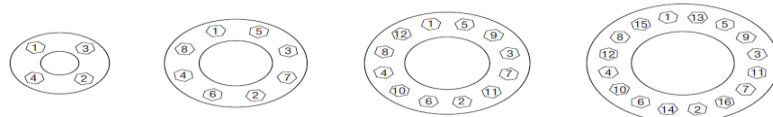
## 4.2 安裝

將閥門放入配對法蘭片之間，同時將法蘭密封墊片放入到閥門的兩側。閥體定位時須以凸耳或者閥門頸部固定固定住該閥門。不能透過以固定執行器或者安裝在蝶閥頂部平臺上的操作機構來支撐該閥門。

使閥門處於法蘭片中間。將雙頭螺柱/螺栓插入閥體的上下定位凸耳孔並鎖緊。然後閥體上剩下的所有凸耳孔統統插入雙頭螺柱/螺栓並鎖緊。慢慢將閥門打到全開狀態，然後再關閉。確保蝶板與鄰近的管道沒有干涉。

完全開啟閥門並鎖緊所有螺栓/螺母。螺母需依照直徑對角方向逐一縮徑（參考下圖中附上的緊縮次序）。最後再重複循環打開和關閉閥門，確保閥門順利運行。

斜對角鎖附方式圖示



Lug 型蝶閥和 Wafer 型蝶閥採用一樣的安裝方式，除緊固件不同之外。

Lug 型蝶閥，需要通過雙頭螺柱或者螺栓來完全穿過的凸耳孔，這一點與 Wafer type 蝶閥上的應用完全一致。帶有螺紋凸耳孔的蝶閥需要較短的螺栓從其中一側插入。



注意：此蝶閥設計不適用於末端用途

## 4.3 操作的局限性

高性能蝶閥是不建議使用於流速超過每秒 4m 的液體和每秒 30m 的氣體介質。請確認流體速度低於上述規定的限度。

蝶閥被用於調節時，受限於在全開的位置，其最大的壓降是 30% 的入口壓力的前提。

### 閥的操作

蝶閥的開和關，是通過蝶板 90 度的旋轉。通常情況下，順時針方向閥門關閉，逆時針方向閥門打開。

## 4.4 操作模式

JDV 蝶閥適合下列任何一種執行器操作：

1. 手柄
2. 手動齒輪箱
3. 氣動執行機構或氣動執行器帶手輪裝置
4. 電動執行機構或電動執行器帶手輪裝置



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## 4.5 移除程序

將閥門從管在線卸下，請按照以下步驟操作：

1. 確保閥門處於完全關閉的位置
2. 確保系統已減壓
3. 確保執行器與電源或氣源斷開。

再卸下蝶閥的操作機構部分（手柄，齒輪箱，氣動執行器或電動執行器）。

確認閥門拆下前已關閉閥門管道系統，吊掛閥時，鏈條或吊索應圍繞閥體固定，再取下法蘭螺栓。



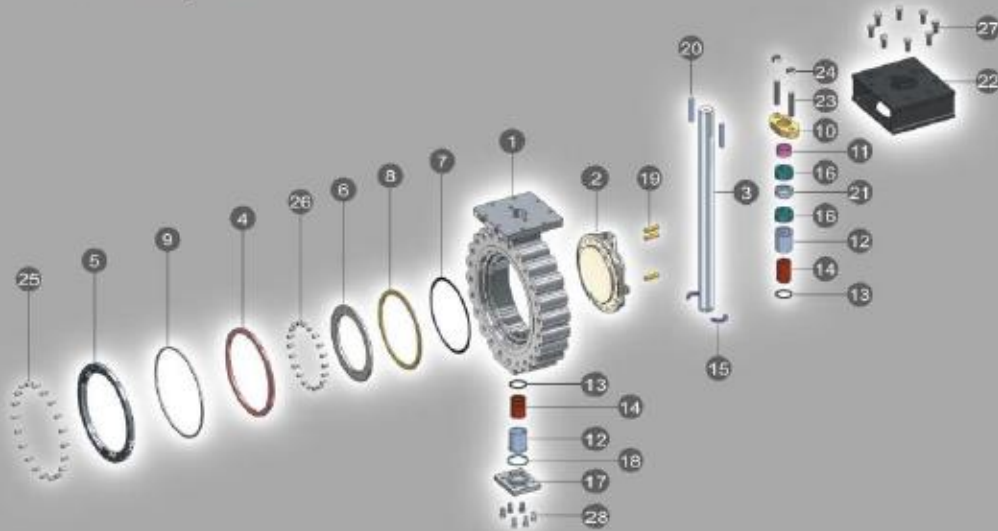


# JDV CONTROL VALVES CO., LTD.

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產品結構/維護和維修

## Technical Specifications



### STANDARD MATERIALS

NO	PART NAME	SM		SH	
		-20-572 °F (-29-300 °C)	A351-CF8M	-20-797 °F (-29-425 °C)	-20-932 °F (-29-500 °C)
1	BODY	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
2	DISC	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
3	STEM	A584-630(HH1150)	A276-XM-19	A276-XM-19/S66286	A276-XM-19/S66286
4	SEAT	A182-F304+HARD FACE	A182-F316+HARD FACE	A182-F304+HARD FACE	A182-F316+HARD FACE
5	BODY RETAINER	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
6	DISC RETAINER	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
7	DISC GASKET	GRAPHITE+316SS	GRAPHITE+316SS	GRAPHITE+316SS	GRAPHITE+316SS
8	SEAL RING	A182-F51+HARD FACE		S66286+HARD FACE	
9	BODY GASKET	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
10	GLAND	A351-CF8	A351-CF8	A351-CF8	A351-CF8
11	GLAND BEARING	A240-316+PTFE		A240-316+HARD FACE	
12	STEM BUSHING	A276-316	A276-316	A276-316+HARD FACE	A276-316+HARD FACE
13	STEM RING SEAL	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
14	THRUST BEARING	TFE/COMPOSITE	TFE/COMPOSITE	N.A.	N.A.
15	THRUST WASHER	A240-316+HARD FACE	A240-316+HARD FACE	A240-316+HARD FACE	A240-316+HARD FACE
16	GLAND PACKING	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
17	END COVER	A216-WCB	A351-CF8M	A216-WCB	A351-CF8M
18	COVER GASKET	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
19	PIN	A584-630 (HH1150)	A276-XM-19	A276-XM-19/S66286	A276-XM-19/S66286
20	KEY	AISI-1045	AISI-1045	AISI-1045	AISI-1045
21	STEM RING	A276-316+HARD FACE	A276-316+HARD FACE	A276-316+HARD FACE	A276-316+HARD FACE
22	BRACKET	A240-304	A240-304	A240-304	A240-304
23	GLAND BOLT	A193-B8	A193-B8	A193-B8	A193-B8
24	GLAND NUT	A194-8	A194-8	A194-8	A194-8
25	BODY RETAINER SCREW	A193-B8	A193-B8	A193-B8M	A193-B8M
26	DISC RETAINER SCREW	A193-B8	A193-B8	A193-B8M	A193-B8M
27	BRACKET SCREW	A193-B8	A193-B8	A193-B8	A193-B8
28	END COVER SCREW	A193-B8	A193-B8	A193-B8	A193-B8

HANDLE/GEAR BOX

The above materials may be changed with different using conditions.



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## 日常維護與問題排除

區域	問題敘述	解決方案
內部	SEAT 密封面洩漏	確認 SEAT ④ 是否刮傷或變形如有請依 4.7.2 步驟更換。
	DISC GASKET 洩漏	確認 SEAL RING ⑧ 是否刮傷或變形如有請依 4.7.3 步驟更換。
外部	中軸洩漏	鎖緊 GLAND NUT ②④、如仍無法止漏請依 4.7.1 步驟更換 GLAND PACKING ①⑥。
	底部洩漏	鎖緊 END COVER SCREW ②⑧、如仍無法止漏請依 4.7.4 步驟更換。

### 推薦的備件

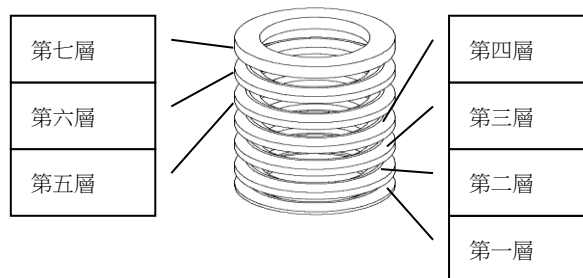
DISC GASKET, BODY GASKET, GLAND PACKING, COVER GASKET...等等。

如遇以上問題之解決方案仍無法處理問題或其他未列出之問題請連絡 JDV。

### 4.6.3 維護和維修

許多重要的設計特點都已使閥座磨損最小化及維護工作量最低化。就其本身而言，無需對高性能蝶閥實施常規化的維修。除有時對 GLAND PACKING ①⑥ 的 GLAND ⑩ 的調整。

假如需要更換閥門組件，閥門必須從管在線卸下（蝶板處於完全關閉狀態），然後用盲板堵掉管道口或者用短接管道插入卸下閥門的位置，使用雙頭螺柱（千斤頂原理）擴大法蘭片間隙以此來方便拆卸閥。





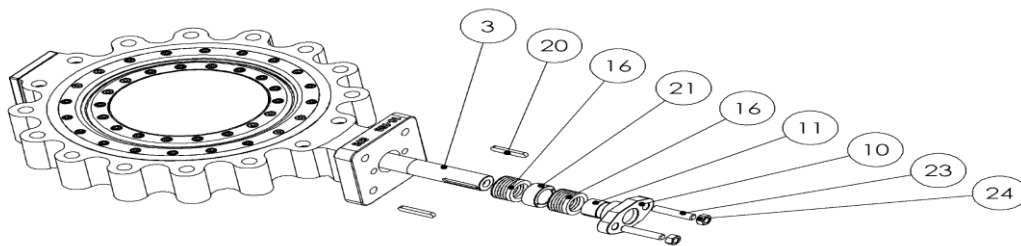
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## 4.7 備品零件更換、裝配

### 4.7.1 GLAND PACKING(16)更換

GLAND PACKING(16)更換須將 GLAND NUT(24)及 GLAND BOLT (23) 以開口板手旋轉取下後、將 GLAND(10) 及 GLAND BEARING (11)取出後，挖出損壞之 GLAND PACKING(16) 並替換新品。

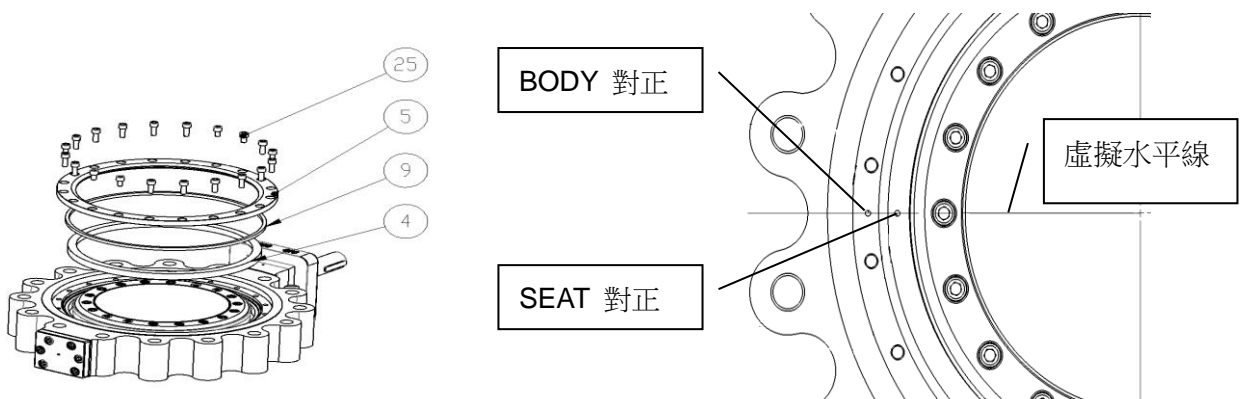


更換安裝新的 GLAND PACKING(24)請依右圖順序(請依備品實際層數為主)

均勻平順的將 GLAND PACKING(24)放入蝶閥上部填料區內。並將 GLAND BEARING (11)及 GLAND(10) 依序裝上最後鎖上 GLAND BOLT (23)及 GLAND NUT(24)完成安裝。

### 4.7.2 BODY GASKET(9) 及 SEAT(4)更換:

依序拆下 BODY RETAINER SCREW(25) 、BODY RETAINER(5)後 BODY GASKET(9) 及 SEAT(4)部分在現場即可更換。



更換完新的 SEAT(4)後、將 SEAT(4)新品放入 BODY(1)內、並將 SEAT(4)之對正點與 BODY(1)對正點對齊與虛擬水平線約略成一直線即可。確認對齊無誤後、再放入 BODY RETAINER(5)後將 BODY RETAINER SCREW(25)對角鎖付即完成更換。注意 SEAT(4)側邊平面、需與 BODY(1)之 SEAT(4)接觸面完全平整貼合無翹起、SEAT(4)止漏面無雜質沾附、已防 SEAT 刮傷。



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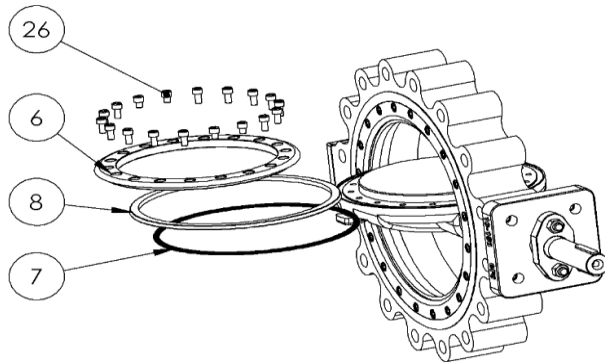


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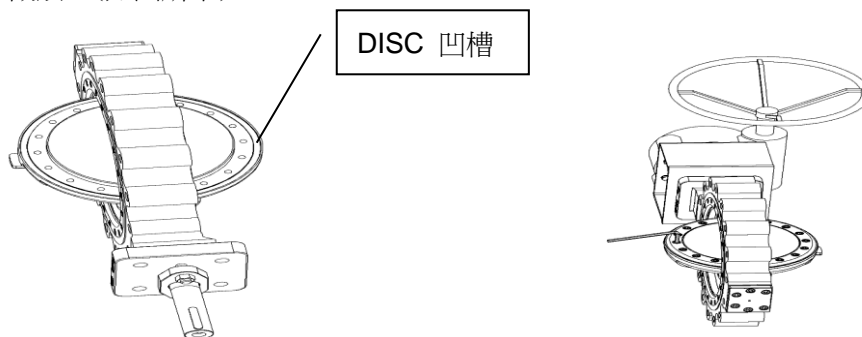
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### 4.7.3 SEAL RING(8)及 DISC GASKET(7)更換:

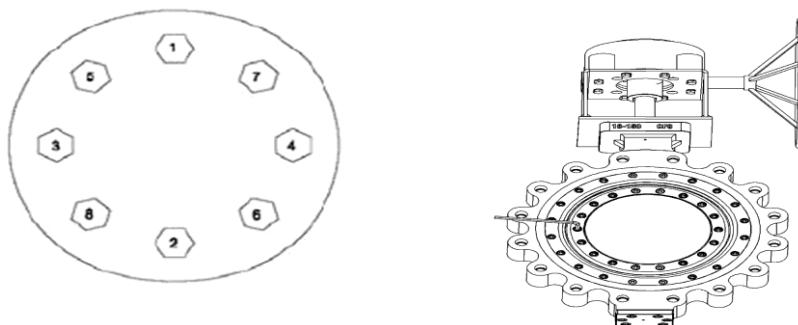
先將 DISC RETAINER SCREW (26) 以六角板手略微旋松、再以驅動器將 DISC 轉至 90 度位置。取出 DISC RETAINER SCREW (26) 以六角板手完全旋松取出、再接續取出 DISC RETAINER(6) 及 SEAL RING(8)、注意取出時注意小心勿碰撞到 SEAT(4) 以免 SEAT(4) 遭到碰傷。最後取出 DISC GASKET(7)。



將新品 DISC GASKET(7) 放入 DISC(4) 凹槽內、再將 SEAL RING(8) 小心放入、注意放入時勿碰撞到 SEAT(4) 以免碰傷。最後放入 DISC RETAINER(6) 及 DISC RETAINER SCREW (26)，DISC RETAINER SCREW (26) 以六角板手對角鎖付方式略微鎖上(如圖所示)。



以驅動器將 DISC 轉至 0 度位置(SEAT(4) 與 SEAL RING(8) 需確認確實接觸以確保止漏面之止漏)、後續將 DISC RETAINER SCREW (26)



對角鎖緊圖示

以對角鎖緊方式即完成更換(如圖所示)。



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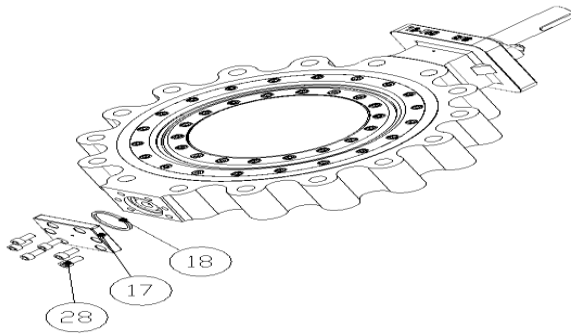
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#### 4.7.4 COVER GASKET(18)更換

先以六角板手將 END COVER SCREW (28)旋松取下、後續將 END COVER(17)拆卸、接著取出 COVER GASKET(18)更換。



將新品 COVER GASKET(18)平順放入 BODY 底部填料區，後續將 END COVER(17)裝入、再以六角板手對角方式鎖付 END COVER SCREW (28)即完成更換安裝。

#### 4.8 閥體組裝完成確認

清理 SEAT(4)和 SEAL RING(8)表面上所有金屬碎片和外界的顆粒雜質。檢查閥門是否被正確組裝，同時固定好對應的操作機構。將 BODY RETAINER(5)及 DISC RETAINER(6)的螺絲全部上緊。安裝執行器在支架上面。擰緊螺栓和螺絲，操作閥門 開關並至注意其操作表現是否良好順暢。







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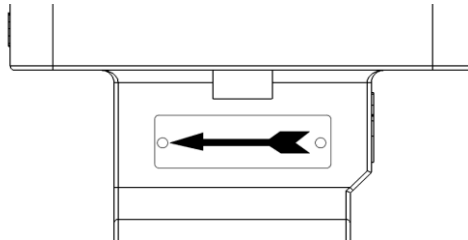
## 標記

### 銘板標記

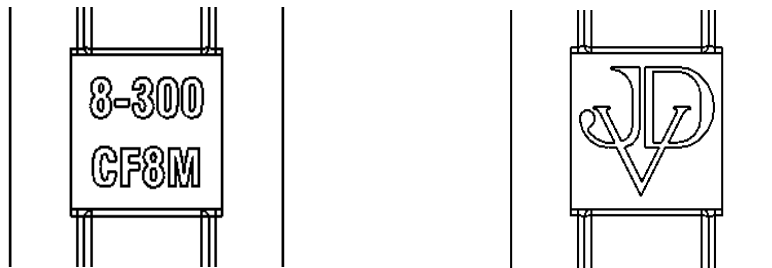
 <b>JDV CONTROL VALVES</b>  B16.34 API 0575 609B	MODEL	JETB-C1-02-A-22			BODY	CF8M
	SIZE	24"	275 PSI @ 100 °F		DISC	CF8M
	CLASS	150LB	170 PSI @MAX 500 °F		STEM	XM-19+HCR
	S/N	20140620001	DATE	2014/06/20	SEAT	F316+HCR
	Not for Dead-end Service				SEAL	GRAPHITE

項次	英文	中文	範例
1	MODEL	目錄參考號	JETM-C1-02-A-22
2	SIZE	閥門尺寸	24"
3	CLASS	壓力等級	150LB
4	S/N	訂單號碼	20140620001
5	DATE	出廠日期	2014/06/20
6	BODY	本體材質	CF8M
7	DISC	DISC材質	CF8M
8	STEM	心軸材質	XM-19+HCR
9	SEAT	球墊材質	F316+HCR
10	SEAL	SEAL RING材質	GRAPHITE

### 流體標記



### 閥門鑄造標記



公稱尺寸:8" 壓力等級:300LB  
材質:CF8M

品牌



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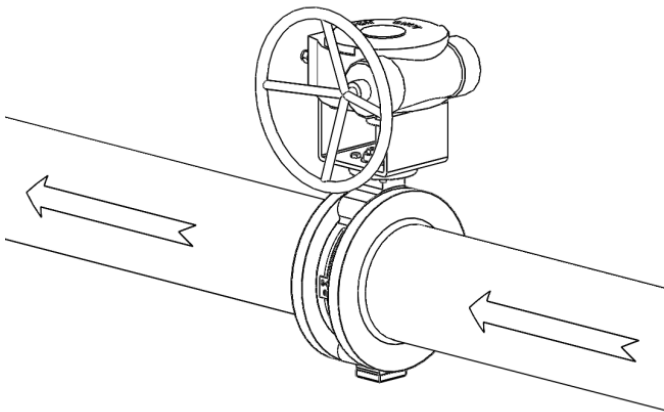
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安裝(INSTALLATION):

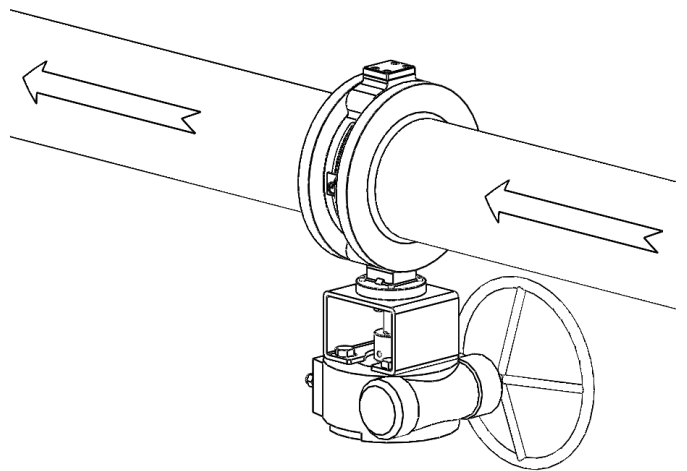
**GEAR BOX**

**O**



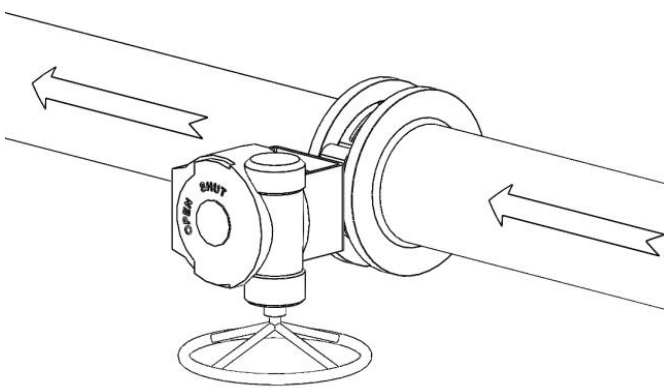
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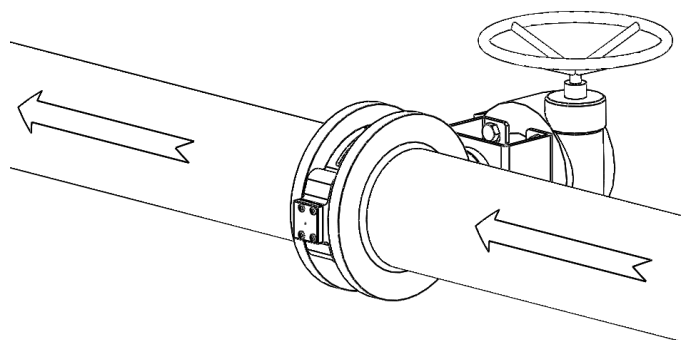
**Worst case**

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**OK**

**O**



**OK**



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