

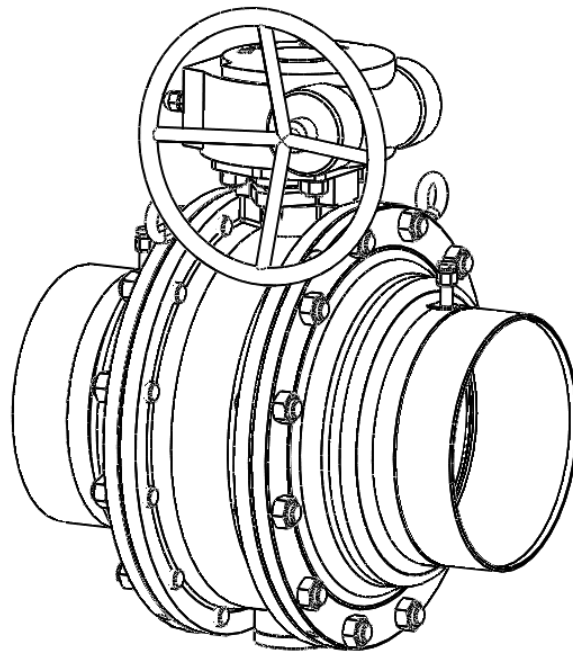


**JDV  
CONTROL  
VALVES**

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

**Installation, Operation and Maintenance**

**JBF-E (DN150~DN350)  
3-PC Floating Type  
Soft Seat Ball Valve**



**VERSION: V 2.1  
ISSUED DATE: 2024/03**



Product Manual



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# JDV CONTROL VALVES



## 1 · Precautions before use

Please read the installation, operation and maintenance manual carefully before operating the product to avoid damage caused by improper use.

(2) Please check the warning signs and descriptions mentioned in this document.

(3) Please place the installation operation and maintenance manual in a place within easy reach for easy access and use.



### Warning slogans

Marked	Illustrate
	Dangerous situations can lead to minor or moderate injuries if not avoided.
	If not avoided, potentially dangerous situations can result in death or serious injury.



### 1.1 Security Notice

The design engineer or the person in charge of the use of the product will confirm the basic product specifications, and check the compliance of the valve and installation equipment to ensure the safety of use.


Before installing the valve, it is necessary to confirm and check whether the operating conditions, including the operating temperature range, maximum working pressure, fluid characteristics, environmental conditions, installation instruments, etc., meet the operating conditions set by the valve.

	<p>warn:</p> <p>Do not exceed the limits shown in the valve specifications or data sheet, as failure to avoid this may result in death or serious injury.</p>
	<p>note:</p> <ol style="list-style-type: none"> <li>1. The valve can be used indoors or outdoors. If used in an exposed atmosphere, attention should be paid to the corrosion and unavoidable conditions of the valve, which may lead to minor or moderate damage.</li> <li>2. After the valve is used by a higher shut-off pressure, the sealing effect will be reduced at a lower shut-off pressure.</li> </ol>

### 1.2 Precautions for disassembly procedures

	<p>warn:</p> <ol style="list-style-type: none"> <li>1. Before disassembly, the valve must be in the semi-open position to ensure that the pressure in the ball cavity is completely released.</li> <li>2. All hazardous substances must be guaranteed to be removed.</li> </ol>
	<p>note:</p> <ol style="list-style-type: none"> <li>1. The dismantling product must be operated by a qualified operator.</li> <li>2. It is recommended to contact JDV for product maintenance and disassembly to avoid danger caused by improper disassembly and assembly.</li> </ol>

## 2 · Product Transportation/Storage/Maintenance Instructions

	<p><b>warn</b></p> <ol style="list-style-type: none"> <li>1. When moving or handling, it is necessary to select the appropriate tools according to the size, use the equipment and accessories (such as slings, fasteners, hooks, etc.) correctly, and consider the individual weight of the packaging details and the total weight of the whole.</li> <li>2. When lifting and handling ball valves, the operator must obtain the operation qualification. Improper lifting will cause the valve body to deform or fall and cause the valve to be damaged.</li> <li>3. Do not use the lifting point or bracket lifting valve set on the cylinder to avoid danger.</li> <li>4. Do not use the handle of the manual valve as a way to lift or lift the ball valve, as the handle of the manual valve will be damaged or disconnected from the valve body, which may lead to destruction or personal injury.</li> </ol>
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※ The product should be properly packed to avoid unnecessary damage caused by transportation and storage in the warehouse, especially the following precautions:

### Transport

- (1) Both ends of the ball valve must be properly protected with appropriate sealing caps, and the ball valve must be vacuum-packed separately in a clean room to ensure that the inside and outside of the valve are clean and prevent foreign objects from entering.
- (2) The type of packing must be such that it can be safely transported to the storage location, please confirm that the vacuum packaging is not invalid and that the carton or wooden box is in good condition.

## 2.1 Preservation and Maintenance

### 2.1.1 Save the packaged ball valve

- (1) Properly protect the packaging to avoid damage to the packaging.
- (2) There should be warning signs for the packaging to ensure unnecessary damage caused by the product movement. Such as: hanging the center of gravity.
- (3) In order to avoid damage to the connecting end, it must be protected by a sealing cap to ensure that the inside of the valve is clean and prevent foreign objects from entering.
- (4) Please keep the valve fully open when storing, partially open may deform the ball pad.
- (5) Keep the storage area clean and dry.
- (6) Please do not expose the product to wind/rain or direct sunlight.
- (7) If the product has been stored for a period of time, check the storage condition of the product regularly.

### 2.1.2 Keep the unpacked/ disassembled ball valve

- (1) Unpacked/disassembled clean valves must be cleaned without oil and dust, protected with a sealed cap, and vacuum-packed before they can be stored.
- (2) For packaged valves, please follow the first item "Save Packaged Valves" for preservation.



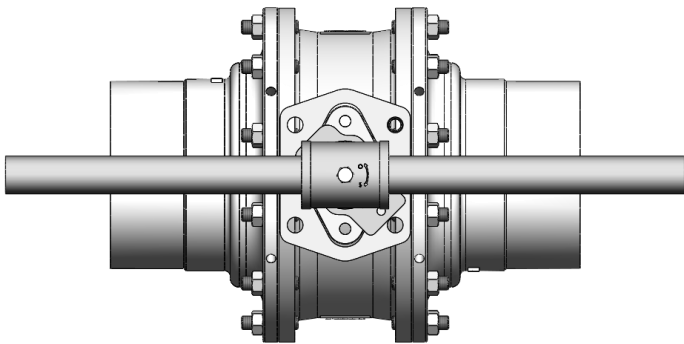
# JDV CONTROL VALVES

## 3. Instructions for installation preparation

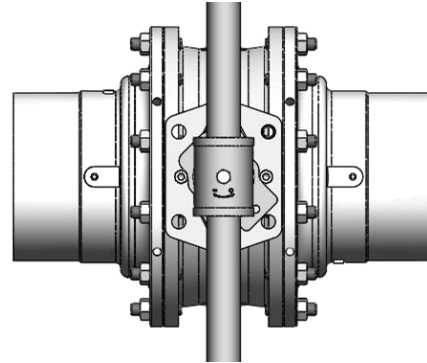
### Manual Valve (Handle/Gearbox)

- (1) When operated manually, excessive or improper handling can damage the positioning rod or other components, resulting in indirect leakage.
- (2) Operate the valve according to the handle instructions, turn it counterclockwise to open or turn it clockwise to close.

\* Ball valve operating position: Please confirm that the plane direction of the top of the ball valve stem is parallel to the handle and pipe, and the ball valve is in the open position.

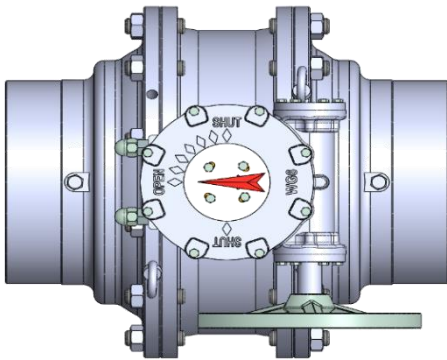


(OPEN)

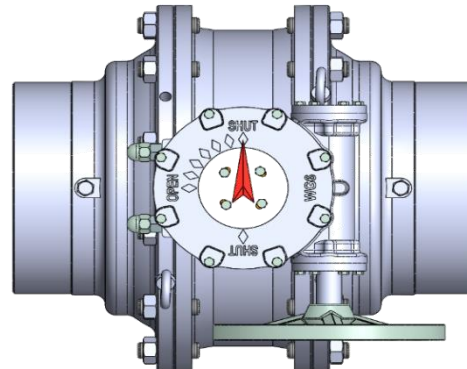


(SHUT)

\* Gearbox Drive—Gearbox indicator switch



(OPEN)



(SHUT)



### NOTE:

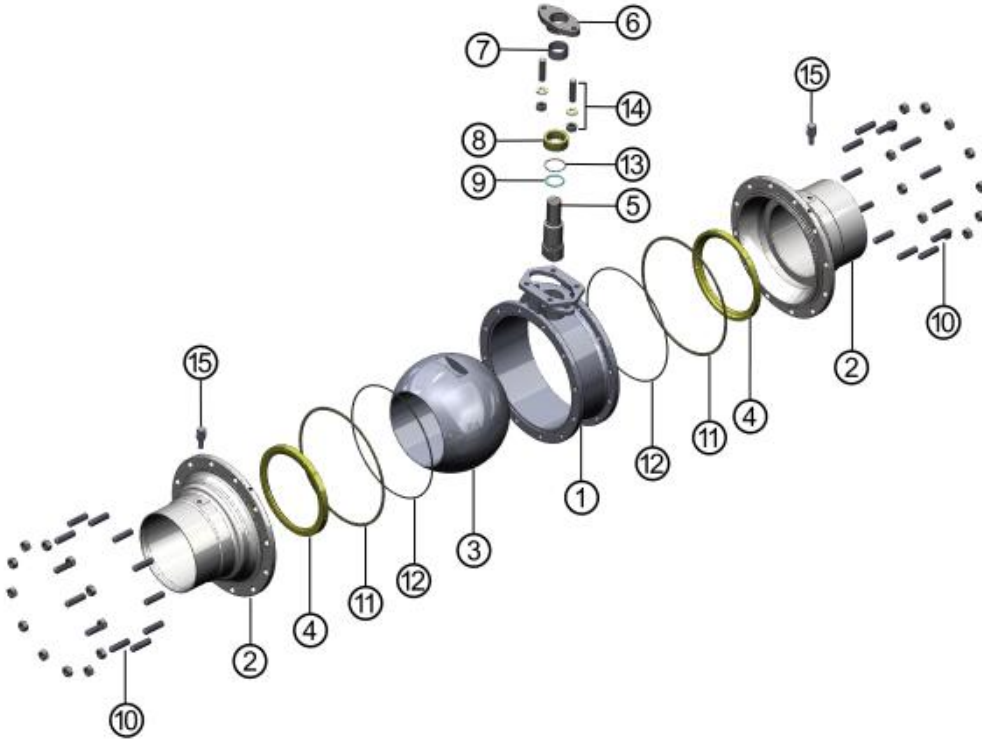
Handles not properly positioned on the locating rod can cause the valve to be under or over stroke, resulting in a potential leak path that will affect the valve warranty.



# JDV CONTROL VALVES

## 4. Product description JBF-E

### 4.1 Exploded view 5"~8"



### 4.2 Parts list

Item	Part name
1	BODY
2	CAP
3	BALL
★ 4	SEAT
5	STEM
6	GLAND
7	GLAND BEARING
★ 8	GLAND PACKING
★ 9	STEM WASHER
10	BOLT
	NUT
★ 11	BODY SEAL
★ 12	O-RING(BODY)
★ 13	O-RING(STEM)
14	BOLT
	NUT
	GASKET
15	PURGE PORT SET(OPTION)

**Note:** Parts marked " ★ " are recommended for replacement when repaired

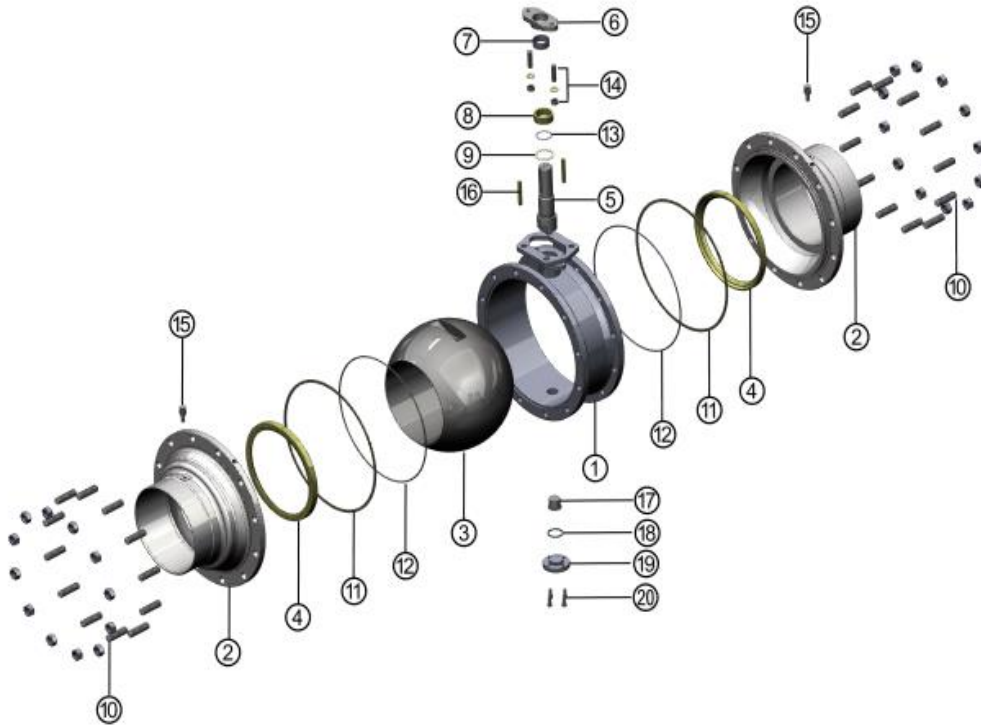
### 4.3 List of materials for repairs

Item	Part name	Quantity
4	SEAT	2pcs
8	GLAND PACKING	1set
9	THRUST WASHER	1 pcs
11	BODY SEAL	2pcs
12	O-RING(BODY)	2pcs
13	O-RING(STEM)	1 pcs



# JDV CONTROL VALVES

## 4.4 Exploded view (10"~12")



## 4.5 Parts list

Item	Part name
1	BODY
2	CAP
3	BALL
★ 4	SEAT
5	STEM
6	GLAND
7	GLAND BEARING
★ 8	GLAND PACKING
★ 9	STEM GASKET
10	BOLT
	NUT
★ 11	BODY SEAL
★ 12	O-RING(BODY)
★ 13	O-RING(STEM)
14	BOLT
	NUT
	GASKET
15	PURGE PORT SET(OPTION)
16	KEY(GEAR BOX)
17	SUPPORT STEM
★ 18	COVER GASKET
19	COVER
20	BOLT

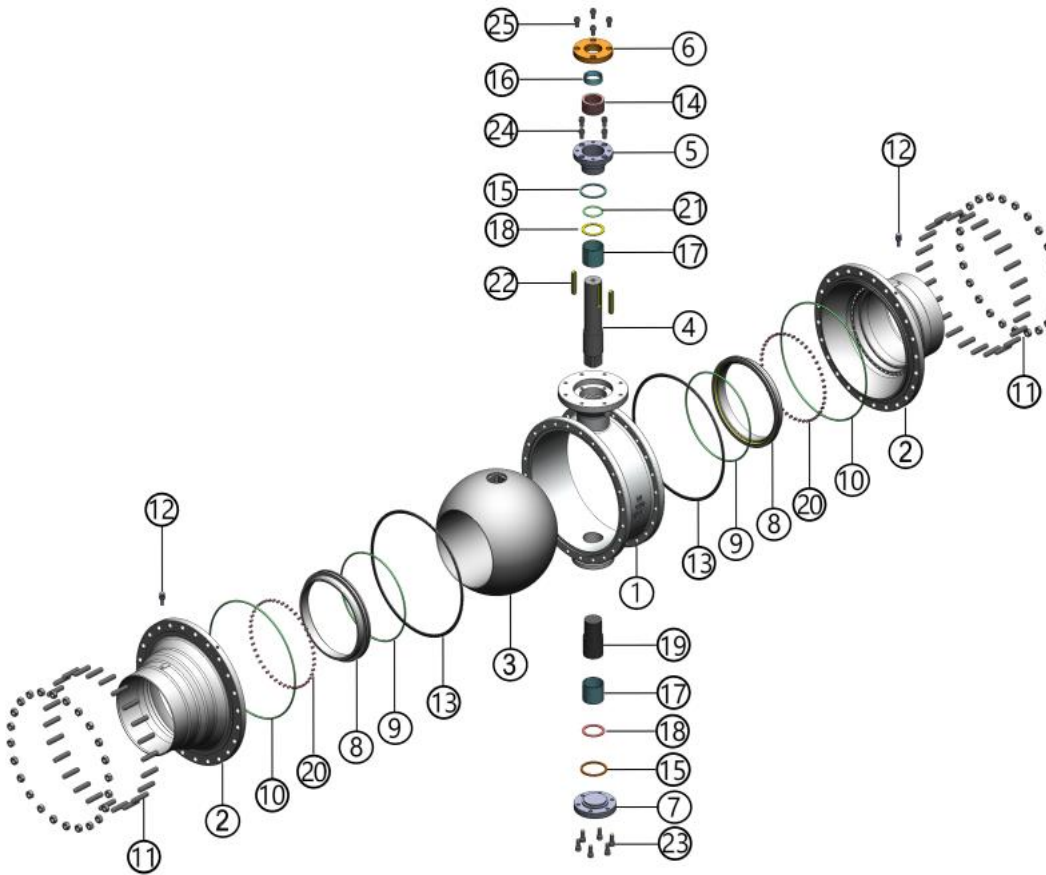
**Note:** Parts marked " ★ " are recommended for replacement when repaired

## 4.6 List of materials for repairs

Item	Part name	Quantity
4	SEAT	2pcs
8	V-SHAPED GLAND PACKING	1set
9	STEM GASKET	1 pcs
11	BODY SEALING GASKET	2pcs
12	O-RING(BODY)	2pcs
13	O-RING(STEM)	1 pcs
18	LOWER COVER GASKET	1 pcs



#### 4.7 Exploded view (14")



**Note :** Parts marked " ★ " are recommended for replacement when repaired

#### 4.9 List of materials for repairs

Item	Part name	Quantity
8	SEAT SET(SOFT)	2pcs
9	O-RING(SEAT)	2pcs
10	O-RING(BODY)	2pcs
13	BODY SEAL	2pcs
14	GLAND PACKING	1pcs
15	STEM GASKET	2pcs
16	GLAND BEARING	1 pcs
18	STEM GASKE	2pcs
21	O-RING(STEM)	1pcs

#### 4.8 Parts list

Item	Part name
1	BODY
2	CAP
3	BALL
4	STEM
5	BODY GLAND
6	GLAND
7	COVER
★ 8	SEAT SET(SOFT)
★ 9	O-RING(SEAT)
★ 10	O-RING(BODY)
11	BOLT NUT
12	PURGE PORT SET(OPTION)
★ 13	BODY SEAL
★ 14	GLAND PACKING
★ 15	STEM GASKET
★ 16	GLAND BEARING
17	THURST BEARING
★ 18	STEM GASKE
19	SUPPORT STEM
20	SPRING
★ 21	O-RING(STEM)
22	STEM KEY
23	BOLT
24	BOLT
25	BOLT





# JDV CONTROL VALVES

## 5 · Preparation before installation

### 5.1 Valve connection pre-inspection

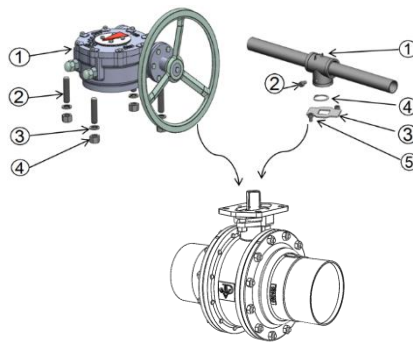
- (1) All procedures shown in this IOM are for butt ends.
- (2) Remove the blue plastic protective cover that was installed at the end of the valve at the factory.
- (3) While looking at the hole, open and close the valve, confirming that the ball position matches the lever position or actuator indicator.
- (4) When installed, the valve must be in the open position to protect the surface of the ball from damage.

### 5.2 Disassembly/Repair

#### 5.2.1. Manual valve drive removal operation:

- (1) Start by separating the gearbox group or handle group from the valve
- (2) For valves with handle combinations, the C-shaped retaining ring ④ and switch stopper ③ need to be removed first..

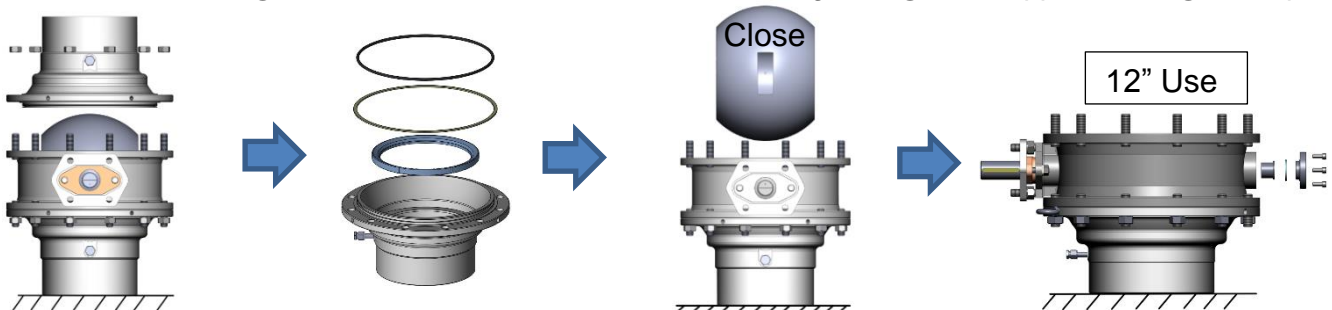
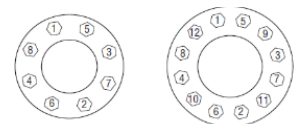
Gearbox Group	
Item	Name
1	Gearbox
2	screw
3	Anti-loosening gasket
4	NUT



Handle Set	
Item	Name
1	HANDLE SET
2	Fixing nut
3	TRAVEL STOP
4	C-CLIP
5	Baffle screw

### 5.3 Valve disassembly: (For 5"~12") \*Please refer to the exploded image

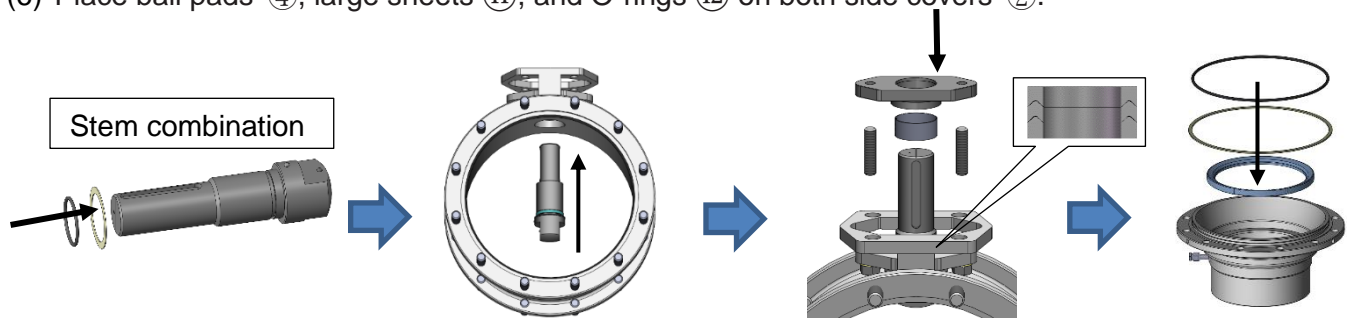
- (1) First, place the joint surface of one side cover ② facing up on a stable cushion to prevent damage to the side cover runner opening.
- (2) Confirm that there is no pressure in the open position and the valve cavity, then turn the valve to the closed state, and then loosen the hexagon nut ⑩ on the joint surface of the valve on one side according to the order of the following icon, and separate and remove the side cover ② and the valve body ①.
- (3) Remove the ball pad ④ from the cover ② and remove the large sheet ⑪ and the O-ring ⑫ of the joint surface °
- (4) Take out the ball ③ from the body ①. **※Please avoid hitting the valve ball**
- (5) For the 12" valve, you must first remove the hexagonal socket screws ⑳ and lower cover ⑲, and then take out the lower cover and tighten ⑱ and support shaft ⑰ in sequence.



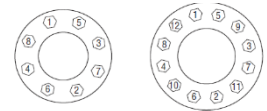
- (6) Loosen the gland screw group ⑭, and remove the gland ⑥ and gland bushing ⑦.
- (7) Take out the mandrel ⑤, small sheet ⑨ and O-RING ⑬ from the inside of the valve body, and then take out the V-shaped middle port packing ⑧ from the top of the valve body.
- (8) Remove the hexagonal nut ⑩ and valve cover ② on the other side of the joint surface, and take out the ball gasket ④ from the cover.

**5.4 Assembly Operation: (For 5"~12") ※Please refer to the exploded image**

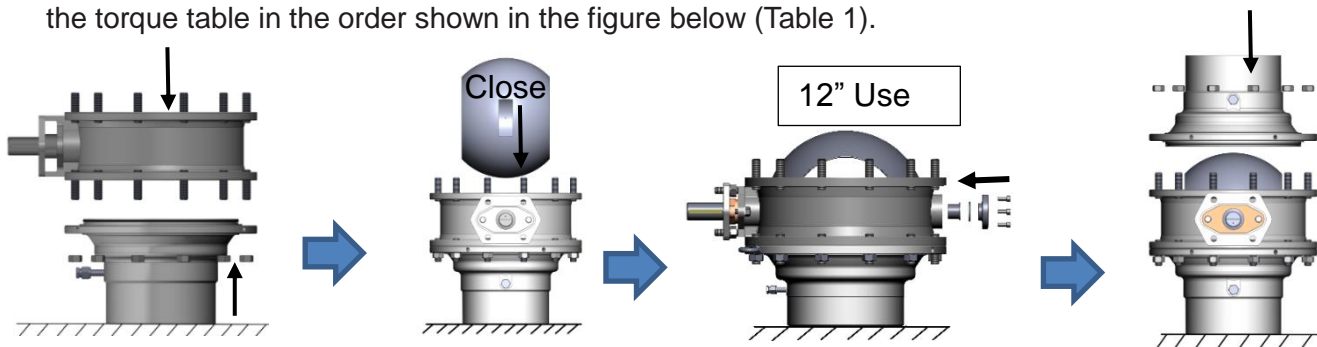
- (1) First place one side cover ② with the joint surface facing up on a stable soft pad to prevent damage to the side cover flow opening.
- (2) Assemble the screws ⑩ on both sides of the body, and then place the V-shaped middle port packing ⑧ from the top of the valve body ① **※Please note that the V-port is facing downwards**
- (3) Combine the small sheet ⑨ and O-RING ⑬ through the mandrel ⑤.
- (4) The spindle assembly is inserted from the inside of the valve body ①.
- (5) Pass the gland ⑥ and gland bushing ⑦ through the mandrel ⑤, then assemble the gland screws ⑭ and lock them according to the torque table (Table 1).
- (6) Place ball pads ④, large sheets ⑪, and O-rings ⑫ on both side covers ②.



- (7) First assemble one side cover ② and the main body ①, and tighten the hexagonal nut ⑩ according to the torque table in the order shown in the figure below (Table 1).
- (8) Confirm that the spindle ⑤ is in the closed position, and put the ball ③ into the main body ① **※Please avoid damaging the valve ball**
- (9) For the 12" valve, first tighten the support shaft ⑰ and the lower cover ⑱ and insert them into the body in sequence ①.



- Then install the lower cover ⑲ and tighten the hexagon socket screws ⑳ according to the torque table (Table 1).
- (10) Assemble the other side cover ② and the body ①, and tighten the hexagonal nut ⑩ according to the torque table in the order shown in the figure below (Table 1).



- (11) Switch the actuating valve on and off.

Note : For the optional gearbox set, please assemble the key pin ⑯. For the handle set, please install it on the square spindle.



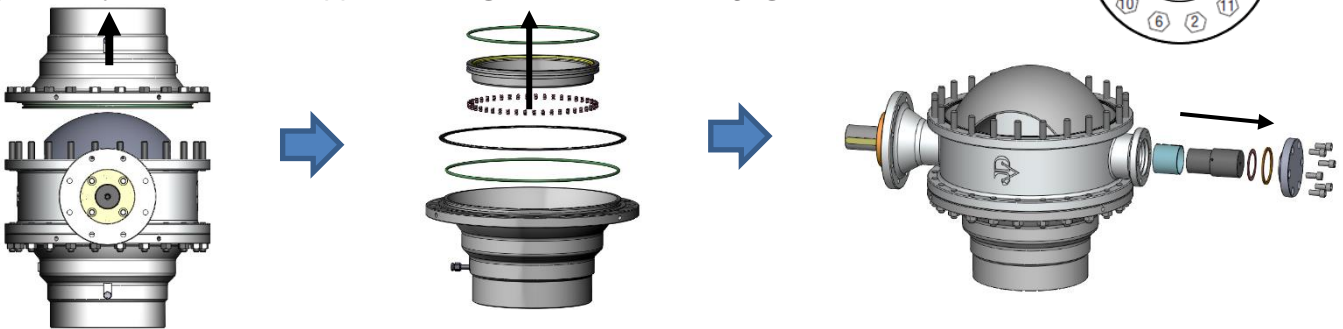
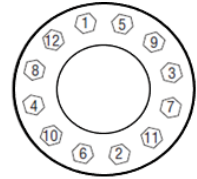
Note: Care must be taken when removing and assembling the valve ball to prevent the sealing surface from being bumped or falling and potentially leaking the risk of leakage, which will affect the valve warranty.



# JDV CONTROL VALVES

## 5.5 Large Valve Dismantling Operations: (for 14") ※ lease refer to the exploded image

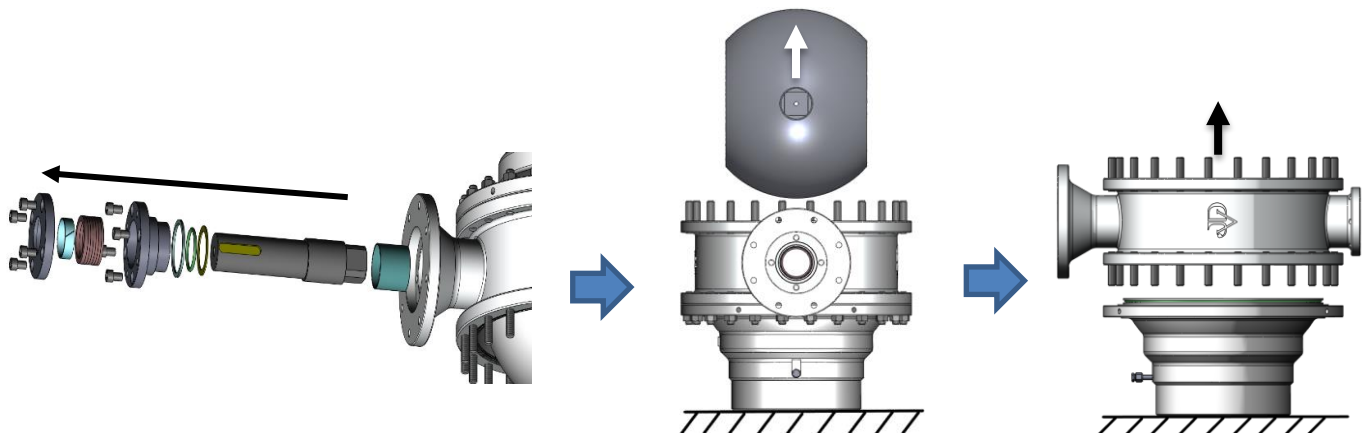
- (1) First, place the joint surface of one side cover (2) facing up on a stable cushion to prevent damage to the side cover runner opening.
- (2) Confirm that the valve is in the open position and there is no pressure in the valve cavity, turn the valve to the closed state, and then loosen the hexagonal nut (11) on the joint surface of side cover (2) according to the sequence shown in the figure below, and separate and remove the side cover (2) from the valve body (1).
- (3) First take out the ball pad set (8) together with the O-RING (9) and spring (20) from the side cover (2).
- (4) Remove the large sheet (13) and O-ring (10) from the joint surface of cover (2) °
- (5) (5) After removing the hexagon socket screw (23) and the lower cover (7), take out the small sheet (15) and the shaft spacer (18) in sequence °
- (6) Finally, take out the support shaft (19) and shaft bushing (17).



- (7) Loosen the hexagon socket screw (25) of the gland (6), and remove the gland (6) and gland bushing (16).
- (8) Loosen the hexagonal socket screw (24) of the bottom bracket pressure plate (5), and remove the bottom bracket pressure plate (5) together with the O-ring (21) and the V-shaped middle mouth packing (14).
- (9) Remove the small sheet (15), and then remove the spindle (4) from the upper end of the valve body. At this time, you can take out the shaft gasket (18) together, and finally remove the shaft bushing (17).
- (10) Use appropriate hanging equipment to remove the valve ball (3) °

※ lease avoid hitting the valve ball

- (11) Remove the hexagonal nut (11) on the other side of the joint surface, and then hang the main body together with the screw (11) to separate the valve cover (2).
- (12) Take out the ball pad set (8) including O-RING (9) and spring (20) from the cover (2), and then remove the large sheet (13) and O-ring (10) on the joint surface.





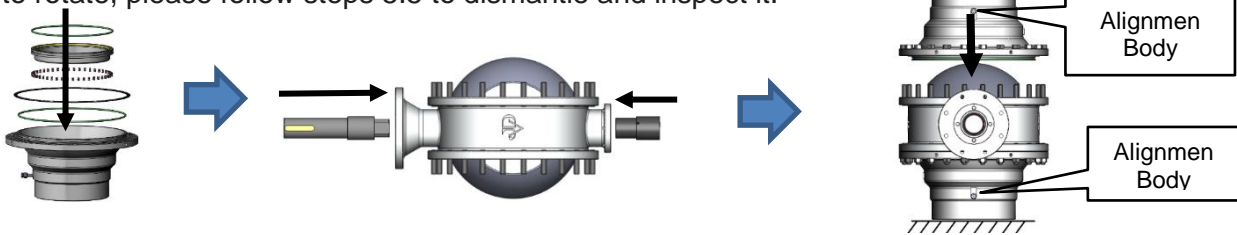
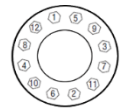
# JDV CONTROL VALVES

## 5.6 Assembly work: (for 14") ※Refer to exploded view

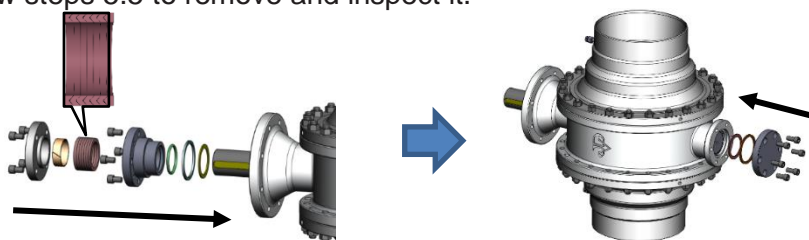
- (1) First place one side cover ② with the joint surface facing up on a stable soft pad to prevent damage to the side cover flow opening.
- (2) Assemble the ball pad set ⑧ including O-RING ⑨ and spring ⑳ on both sides of the cover ②, and then install the large sheet ⑬ and O-ring ⑩.
- (3) Assemble the screw ⑪ to both sides of the body ①, and then install a bushing ⑰ from the upper/lower shaft end.
- (4) Place the main body together with the screw ⑪ on a stable surface, and raise the main body ① to reserve space for the valve ball ③.
- (5) When the valve ball ③ is in the hanging state, insert the spindle ④ and the support shaft ⑱ from the body into the valve ball ③, and confirm that the spindle is in the closed position °

※Please avoid damaging the valve ball

- (6) Hang the main body together with the valve ball ③ and install it on the valve cover ②, and pay attention to the alignment position of the valve body and the cover.
- (7) After combining the body ① and the valve cover ②, use the hexagonal nut ⑪ to fix it first without locking.
- (8) Then hang the other side cover ② and assemble it with the body ①, and pay attention to the alignment position of the valve body and cover.
- (9) And fasten the hexagonal nuts ⑪ on both sides of the cover according to the torque table in the order shown on the right (Table 1).
- (10) First open and close the valve once to confirm that it rotates smoothly. If there is interference or failure to rotate, please follow steps 5.5 to dismantle and inspect it.



- (11) Insert the shaft spacer ⑱ and the small sheet ⑮ from the middle opening of the body ①
- (12) Install the O-ring ⑳ on the central axis pressure plate ⑤ and assemble it together with the valve body, and then tighten the hexagon socket screw ⑳ according to the torque table (Table 1).
- (13) Install the V-shaped middle mouth packing ⑭ in the bottom bracket pressure plate ⑤
- ※Please note that the V-port is facing downwards
- (14) Pass the gland ⑥ together with the gland bushing ⑰ through the mandrel ⑤, and tighten the hexagon socket screw 25 according to the torque table (Table 1)
- (15) Install the shaft spacer ⑱ and the small sheet ⑮ in sequence, and then secure the lower cover ⑦ with hexagon socket screws ⑳ and according to the torque table (Table 1)
- (16) Finally, open and close the valve to confirm that it rotates smoothly. If there is interference or failure to rotate, please follow steps 5.5 to remove and inspect it.



Note: Care must be taken when hanging and dismantling and assembling the valve ball to prevent the sealing surface from being bumped or falling and resulting in a potential leakage risk, which will affect the valve warranty.



**6 · Product Maintenance**

**6.1 Open/close the valve regularly :**

The valve is in the open or closed position for a long time, and it is recommended to cycle it once at a regular rate to ensure the operation of the valve.

**6.2 Check the gland screws ⑭ and the joint surface screws ⑩ :**

The gland screw set ⑭ and the bolts/nuts ⑩ of the joint surface under the handle group should be checked regularly, and if necessary, the locking should be adjusted according to the torque and locking sequence (Table 1), and the locking should be carried out clockwise.

Size	Joint surface bolt size (bolt material: A2-70)	Torque Unit : n-m	Bolt size (Bolt material: A2-70)	Torque Unit : n-m
5"	M12x1.75	63	M12x1.75	20
6"	M12x1.75	63	M12x1.75	20
8"	M16x2.0	157	M16x2.0	40
10"	M20x2.5	308	M16x2.0	40
12"	M24x3.0	533	M16x2.0	40
14"	M20x2.5	308	M16x2.0	43

Note: The friction coefficient of grease used in the above parameters: 0.20, please pay attention to the friction coefficient of grease during maintenance, if you have any doubts, please notify JDV (Table 1)

**6.3 Routine maintenance :**

Maintain routine maintenance to ensure optimal sealing function, refer to Table 1 for torque tightening nuts until the leak stops.

**7 · Troubleshooting**

Area	Problem Description	Solution
Internal leakage	Leakage of the ball and seat seal surface occurs	<ol style="list-style-type: none"> <li>1. Please confirm whether the sealing surfaces of the valve ball ③ and ball gasket ④ are damaged or scratched.</li> <li>2. Confirm that the ball ③ or valve seat ④ is damaged, please replace it.</li> <li>3. Please confirm the valve ball ③ and ball gasket set ⑧ and O-RING ⑨ for 14".</li> </ol>
leakage	A leak occurred in the stem seal	<ol style="list-style-type: none"> <li>1. Tighten the gland screw group ⑭, please refer to the torque reference for each specification (Table 1).</li> <li>2. If the leakage cannot be stopped, please replace the V-shaped middle opening packing ⑧.</li> <li>3. It is necessary to replace the small sheet ⑨ and O-RING ⑬ every time it is disassembled.</li> <li>4. Please tighten the hexagon socket screws 25 of the gland instead of 14".</li> <li>5. 14" It is recommended to replace the small sheet ⑮ and O-RING 21 every time it is disassembled.</li> </ol>
	Leakage occurred in the body/bonnet seal	<ol style="list-style-type: none"> <li>1. Please refer to (Table 1) for locking nut ⑩.</li> <li>2. If leakage cannot be stopped, it is recommended to replace the main body sealing gasket ⑪ and O-ring ⑫.</li> <li>3. Please change the locking nut ⑪ for 14".</li> <li>4. If the 14" joint surface cannot stop leakage, it is recommended to replace the large sheet ⑬ and O-ring ⑩.</li> </ol>

Note: Please refer to 4.1/4.4/4.7 structure diagram for part number description.





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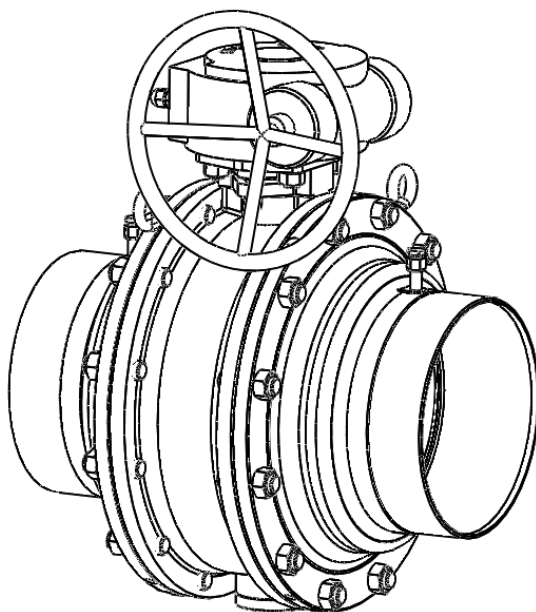
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# 進典工業股份有限公司

## JDV CONTROL VALVES CO.,LTD.

### 安裝、操作和維護手冊

### JBF-E (DN150~DN350) 三片浮動式軟密封球閥



版本 : V 2.1

發行日期 : 2024/03



Product Manual





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## 1、使用前須知

- (1) 操作產品前請先仔細閱讀安裝操作維修手冊，避免不當使用造成損壞。
- (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。



### 1.1 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，已確保使用的安全。


在安裝閥門前，須確認檢查操作條件，包含使用溫度範圍、最大工作壓力、流體特性、環境條件、安裝儀表等，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限值，如果不能避免，可能導致死亡或嚴重傷害。
	<b>注意:</b> 1.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無法避免之情況，可能導致輕微或中度損傷。 2.閥門使用時經過較高的關斷壓力後，在較低的關斷壓力下的密封效果會降低。

### 1.2 拆卸程序注意事項

	<b>警告:</b> 1.拆卸前，閥門必須處於半開位置，以保證球腔內的壓力完全釋放。 2.所有有害物質必須保證被清除。
	<b>注意:</b> 1.拆除產品必須由合格的操作人員操作。 2.產品維修和拆卸建議聯繫 JDV 進典，避免因拆裝不當造成危險。

## 2、產品運送/保存/維護須知

	<p><b>警告</b></p> <ol style="list-style-type: none"> <li>1.移動或搬運時，必須按尺寸選擇合適的工具，正確使用設備和配件（如吊索、緊固物、掛鉤等），須考慮包裝明細的個別重量和全部的總重量。</li> <li>2.吊升和處理球閥時，操作人員必須取得操作資格。不適當的吊升會造成閥體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球閥用，會使手動閥之把手損壞或與閥體斷開分離，可能導致毀壞或人員傷害。</li> </ol>
---	--

※ 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) 球閥兩側端必須使用適當的密封蓋保護妥當，並在無塵室將球閥進行個別真空包裝，以確保閥門內部及外部清潔，並防止異物進入。
- (2) 裝箱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真空包裝未失效、紙箱或木箱保持完整狀態。

### 2.1 保存及維護

#### 2.1.1 保存已包裝之球閥

- (1) 將包裝加以適當保護，以避免包裝之損壞。
- (2) 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。
- (3) 為避免連接端受損，必須使用密封蓋保護，以保證閥門內部清潔，防止異物進入。
- (4) 存放時請將閥門保持全開，部分開啟之狀態可能會使球墊變形。
- (5) 存放場所需保持乾淨及乾燥。
- (6) 請不要將產品暴露於風/雨中或直接日晒。
- (7) 如果產品存放一段時間，請定期檢查產品保存狀況。

#### 2.1.2 保存未包裝/已拆裝球閥

- (1) 未包裝/已拆裝之潔淨閥必須經過禁油無塵清潔後，使用密封蓋保護連接端，並以真空包裝才能進行保存。
- (2) 經包裝完成之閥門，請依第一項“保存已包裝之閥門”方式進行保存。



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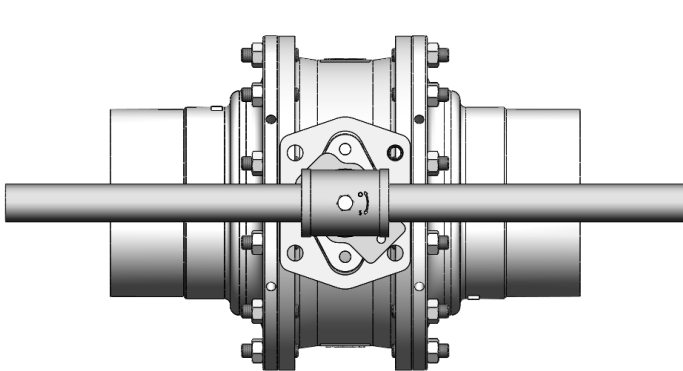
### 3.安裝準備須知:

手動閥（把手/齒輪箱）

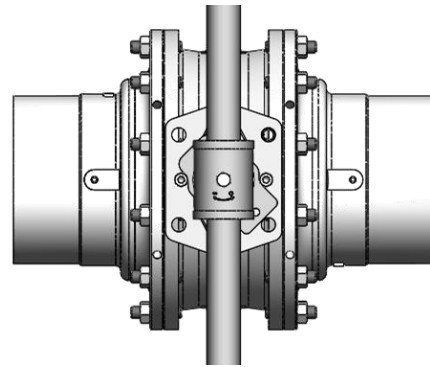
(1) 手動操作時，過度或操作不當會損壞定位桿或其他部件導致間接洩漏。

(2) 依把手指示操作閥門，逆時針旋轉打開或順時針旋轉關閉。

\* 球閥操作位置:請確認球閥閥桿頂部的平面方向與把手和管道平行，球閥處於開啟位置。

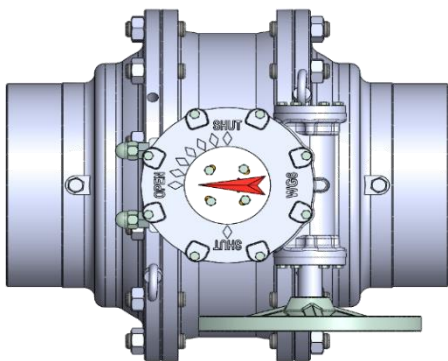


(OPEN)

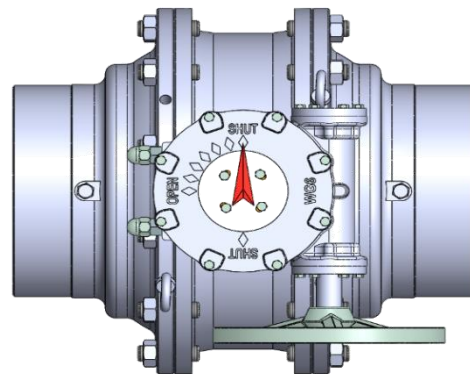


(SHUT)

\* 齒輪箱驅動—齒輪箱指示開關



(OPEN)



(SHUT)



注意:

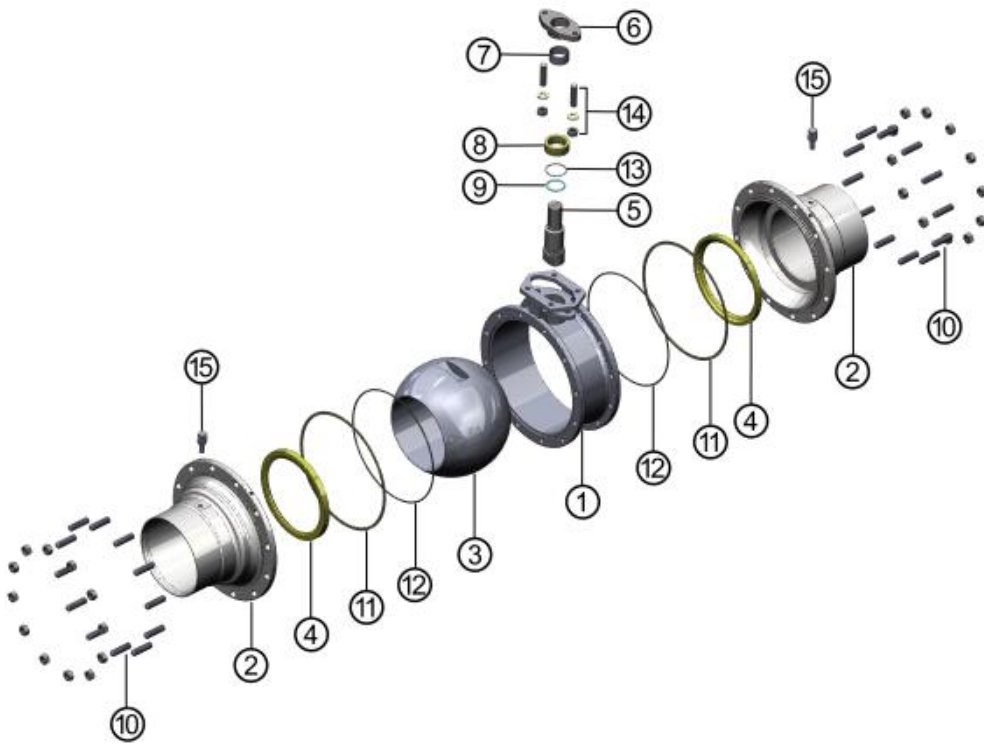
把手未確實定位於定位桿會導致閥門低於或超過行程，從而導致潛在的洩漏路徑，這將影響閥門保修。



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#### 4. 產品說明 JBF-E

##### 4.1 爆炸視圖 5" ~8"



**Note:**標註”★”零件為維修時推薦更換

##### 4.2 零件料表

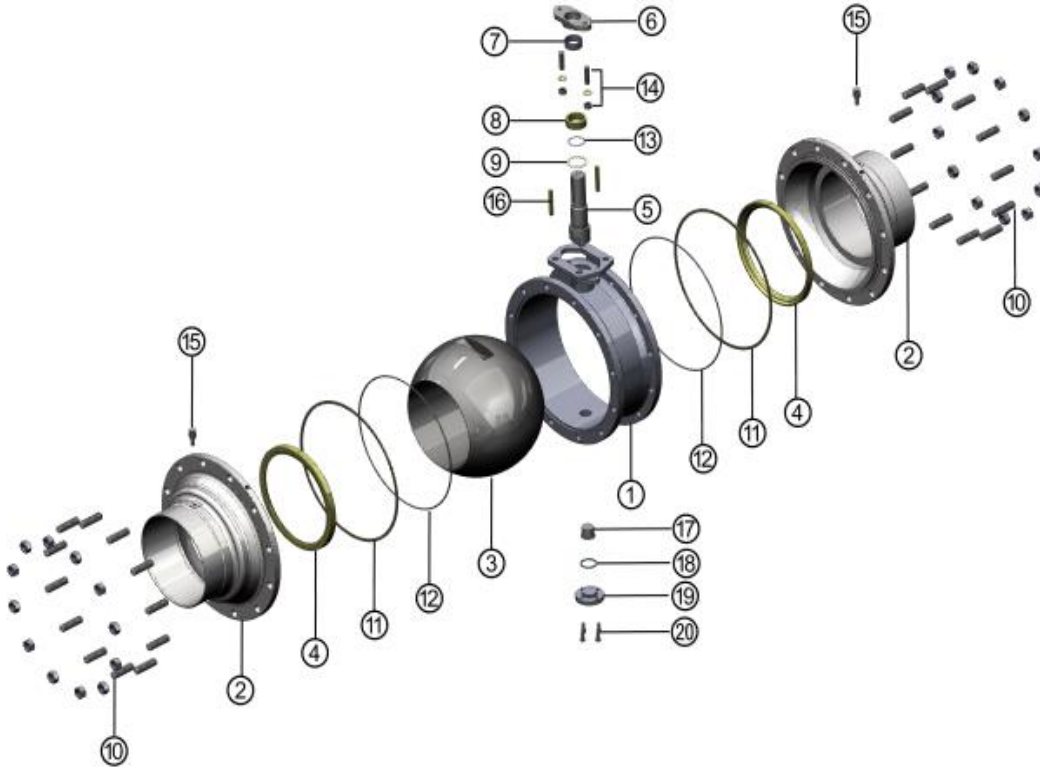
項次	名稱
1	本體
2	蓋
3	球
★4	球墊
5	心軸
6	壓蓋
7	壓蓋襯套
★8	V型中口填料
★9	小薄片
10	螺桿 六角螺帽
★11	大薄片
★12	O-RING(本體用)
★13	O-RING(心軸用)
14	牙桿
	螺帽
	防鬆墊片
15	PURGE PORT 吹掃組 (OPTION)

##### 4.3 維修包料表

項次	部件名稱	數量
4	球墊	2pcs
8	V型中口填料	1set
9	小薄片	1 pcs
11	大薄片	2pcs
12	O-RING(本體用)	2pcs
13	O-RING(心軸用)	1 pcs



4.4 爆炸視圖(10" ~12" )



4.5 零件料表:

項次	名稱
1	本體
2	蓋
3	球
★4	球墊
5	心軸
6	壓蓋
★7	壓蓋襯套
★8	V型中口填料
★9	小薄片
10	螺桿 六角螺帽
★11	大薄片
★12	O-RING(本體用)
★13	O-RING(心軸用)
14	牙桿 螺帽 防鬆墊片
15	PURGE PORT 吹掃組 (OPTION)
16	心軸鍵銷(齒輪箱用)
17	支撐軸
★18	下蓋迫緊
19	下蓋
20	內六角螺絲

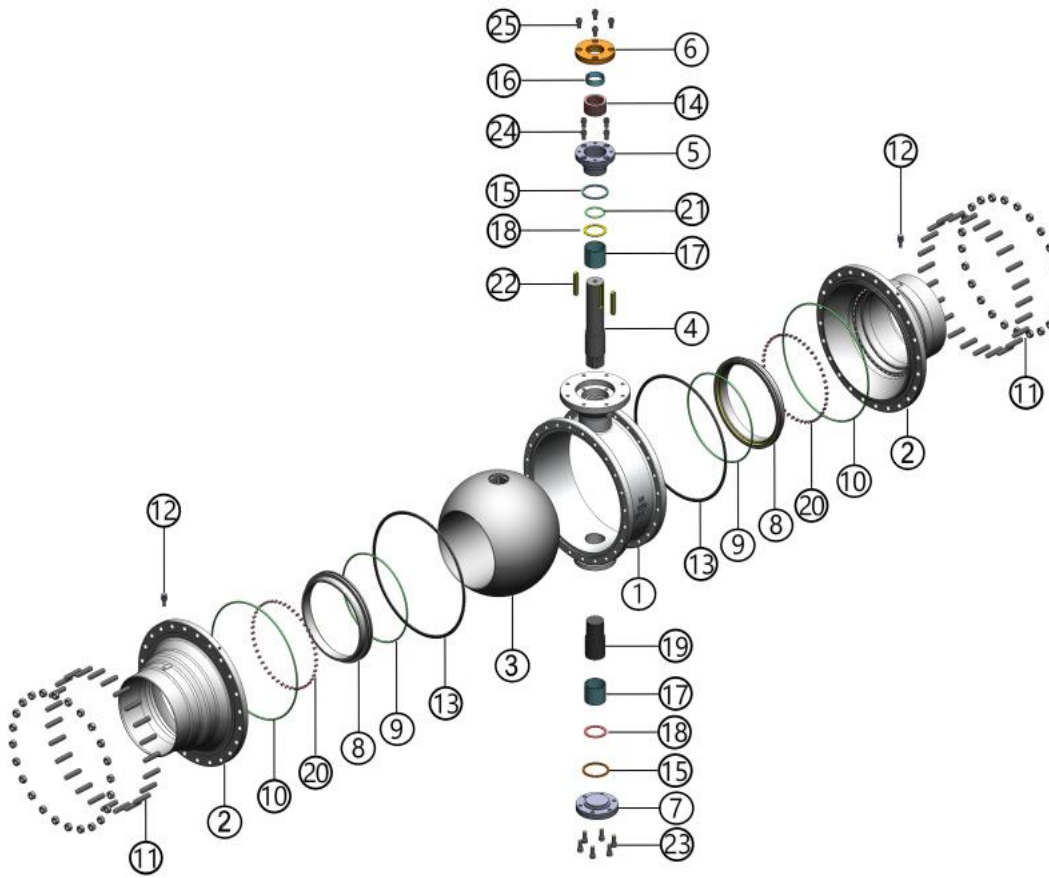
**Note:**標註” ★ ”零件為維修時推薦更換

4.6 維修包料表

項次	部件名稱	數量
4	球墊	2pcs
8	V型中口填料	1set
9	心軸墊片	1 pcs
11	本體密封墊片	2pcs
12	O-RING(本體用)	2pcs
13	O-RING(心軸用)	1 pcs
18	下蓋迫緊	1 pcs



**4.7 爆炸視圖(14" )**



**4.8 零件料表**

項次	名稱
1	本體
2	蓋
3	球
4	心軸
5	中軸壓板
6	壓蓋
7	下蓋
★ 8	球墊組(SOFT)
★ 9	O-RING(球墊用)
★ 10	O-RING(本體用)
11	螺桿 六角螺帽
12	PURGE PORT 吹掃組 (OPTION)
★ 13	大薄片
★ 14	V 型中口填料
★ 15	小薄片
★ 16	壓蓋襯套
17	軸襯套
★ 18	軸墊片
19	支撐軸
20	彈簧
★ 21	O-RING(心軸用)
22	心軸鍵銷
23	內六角螺絲
24	內六角螺絲
25	內六角螺絲

**Note:**標註” ★ ”零件為維修時推薦更換

**4.9 維修包料表**

項次	部件名稱	數量
8	球墊組(SOFT)	2pcs
9	O-RING(球墊用)	2pcs
10	O-RING(本體用)	2pcs
13	大薄片	2pcs
14	V 型中口填料	1pcs
15	小薄片	2pcs
16	壓蓋襯套	1 pcs
18	軸墊片	2pcs
21	O-RING(心軸用)	1pcs





## 5、安裝前準備

### 5.1 閥門連接前檢查

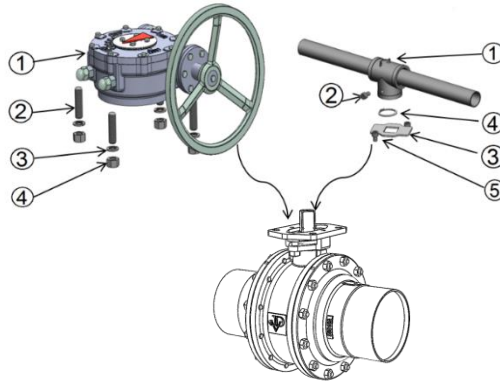
- (1) 本 IOM 中顯示的所有程序均適用於對接焊端。
- (2) 拆下出廠時安裝於閥門末端的藍色塑膠保護蓋。
- (3) 在查看孔的同時，打開和關閉閥門，確認球位置與槓杆位置或執行器指示器匹配。
- (4) 安裝時，閥門必須處於打開位置，以保護球體表面免受損壞。

### 5.2 拆卸/維修作業:

#### 5.2.1 手動閥門驅動裝置拆除作業:

- (1) 先將齒輪箱組或把手組與閥門分開。
- (2) 把手組合之閥門，需先將 C 型扣環④及開關檔片③移除。

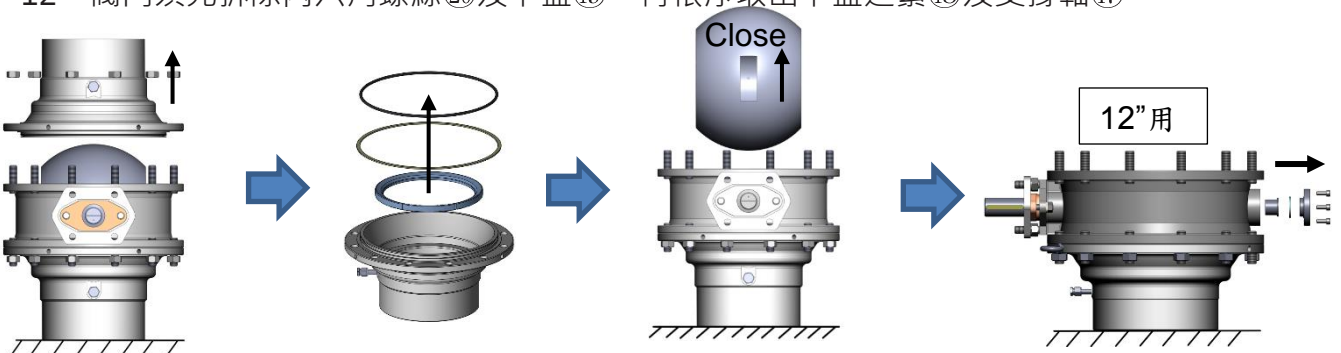
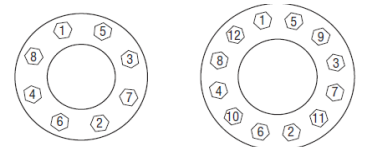
齒輪箱組	
項次	名稱
1	齒輪箱
2	螺桿
3	防鬆墊片
4	螺母



把手組	
項次	名稱
1	把手組
2	固定螺母
3	擋片
4	C 型扣環
5	擋片螺絲

### 5.3 拆卸閥門作業: (適用 5" ~12" ) ※請參照爆炸圖

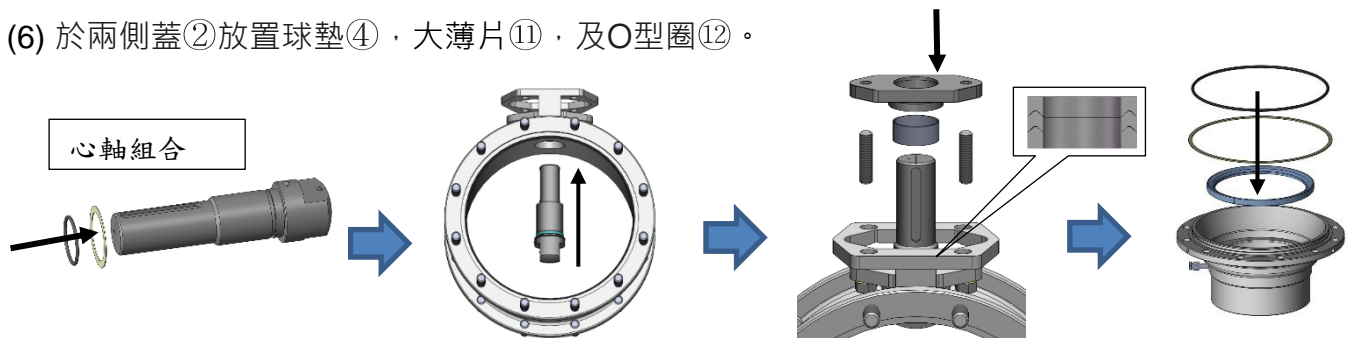
- (1) 先將一邊側蓋②的結合面朝上放置於平穩的軟墊上防止側蓋流道口損傷。
- (2) 確認閥門於開位置及閥腔無壓力，再將閥門轉至關閉狀態，再依下圖示順序鬆開一側閥門結合面六角螺帽⑩，並將一邊側蓋②與閥體①分離拆除。
- (3) 將球墊④從蓋②取出，並拆卸結合面的大薄片⑪與 O 型環⑫。
- (4) 將球③由本體①取出。 **※請避免撞傷閥球**
- (5) 12" 閥門須先拆除內六角螺絲⑳及下蓋⑱，再依序取出下蓋迫緊⑱及支撐軸⑰。



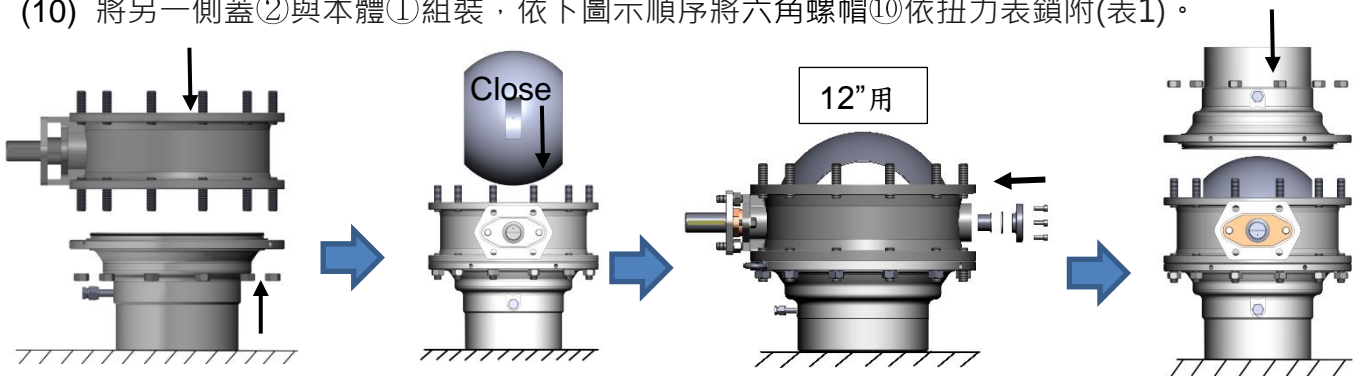
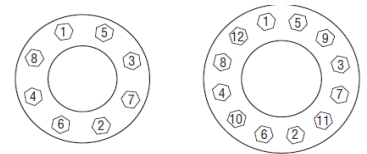
- (6) 鬆開壓蓋螺絲組⑭，將壓蓋⑥及壓蓋襯套⑦拆除。
- (7) 由閥體內側取出心軸⑤及小薄片⑨和 O-RING⑬，再由閥體上方取出 V 型中口填料⑧。
- (8) 拆卸另一側結合面六角螺帽⑩及閥蓋②，將球墊④從蓋取出。

**5.4 組裝作業: (適用 5" ~12" ) ※請參照爆炸圖**

- (1) 先將一邊側蓋②的結合面朝上放置於平穩的軟墊上防止側蓋流道口損傷。
- (2) 將螺桿⑩組裝於本體兩側，再由閥體①上方放置 V 型中口填料⑧。 **※請注意 V 口方向朝下**
- (3) 將小薄片⑨和 O-RING⑬穿過心軸⑤組合。
- (4) 心軸組合由閥體①內側放入。
- (5) 將壓蓋⑥及壓蓋襯套⑦穿過心軸⑤，再將壓蓋螺絲組⑭，並依扭力表鎖附(表1)。
- (6) 於兩側蓋②放置球墊④，大薄片⑪，及O型圈⑫。



- (7) 先將一邊側蓋②與本體①組裝，並依下圖示順序將六角螺帽⑩依扭力表鎖附(表1)。
- (8) 確認心軸⑤於關閉位置，將球③由本體①放入。 **※請避免撞傷閥球**
- (9) 12" 閥門先將支撐軸⑰及下蓋迫緊⑱依序置入本體①。  
再安裝下蓋⑲並依扭力表鎖附(表 1)內六角螺絲⑳。
- (10) 將另一側蓋②與本體①組裝，依下圖示順序將六角螺帽⑩依扭力表鎖附(表1)。



- (11) 開關作動閥門即可。

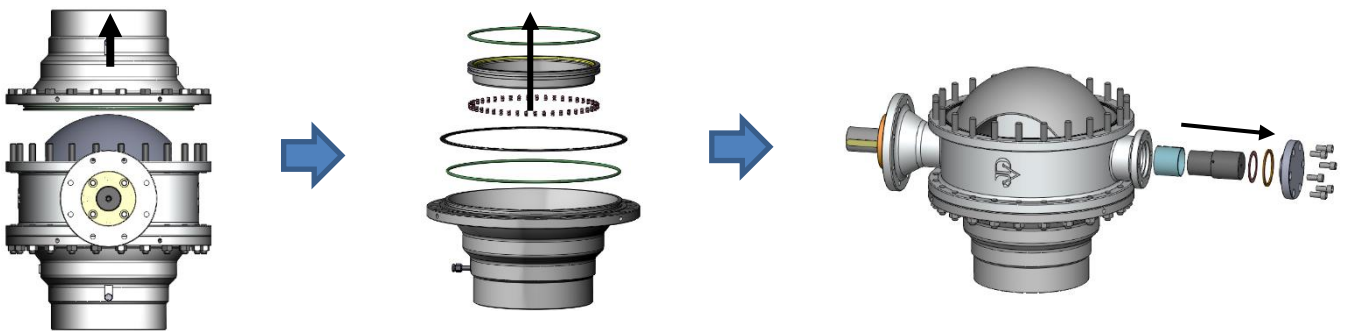
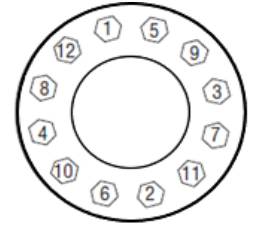
Note: 選配齒輪箱組，請裝配鍵銷⑯，把手組配置請裝置於四方心軸。



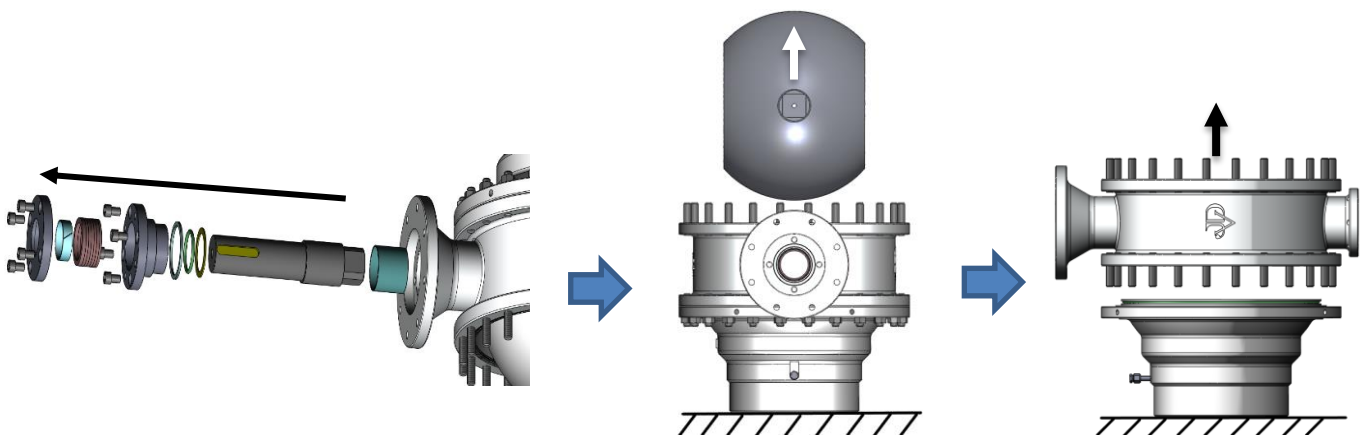
注意: 拆除及組裝閥球時須注意防護，防止密封面撞傷或掉落從而導致潛在的洩漏風險，這將影響閥門保修。

### 5.5 大型閥門拆卸作業: (適用 14" ) ※請參照爆炸圖

- (1) 先將一邊側蓋②的結合面朝上放置於平穩的軟墊上防止側蓋流道口損傷。
- (2) 確認閥門於開位置及閥腔無壓力，將閥門轉至關狀態，再依下圖順序鬆開一側蓋②結合面的六角螺帽⑪，並將一邊側蓋②與閥體①分離拆除。
- (3) 先將一側蓋②內取出球墊組⑧連同 O-RING⑨及彈簧⑳。
- (4) 拆下蓋②結合面的大薄片⑬與 O 型環⑩。
- (5) 再將內六角螺絲⑲及下蓋⑦拆除後，依序取出小薄片⑮及軸墊片⑱。
- (6) 最後將支撐軸⑰及軸襯套⑱取出。



- (7) 鬆開壓蓋⑥的內六角螺絲⑲，將壓蓋⑥及壓蓋襯套⑱拆除。
- (8) 鬆開中軸壓板⑤的內六角螺絲⑲，將中軸壓板⑤連同 O 型環⑩及 V 型中口填料⑭拆除。
- (9) 將小薄片⑮拆除，再由閥體上端拆卸心軸④，此時可將軸墊片⑱一併取出，最後再將軸襯套⑱拆下。
- (10) 使用合適的吊掛設備取出閥球③。 **※請避免撞傷閥球**
- (11) 拆卸另一側結合面六角螺帽⑪，再將本體連同螺桿⑪吊掛分離閥蓋②。
- (12) 將球墊組⑧含 O-RING⑨及彈簧⑳從蓋②取出，再拆下結合面的大薄片⑬與 O 型環⑩。



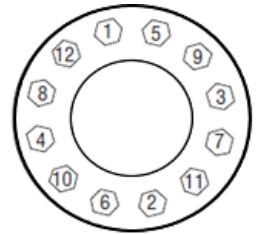


**5.6 組裝作業：(適用 14" ) ※請參照爆炸圖**

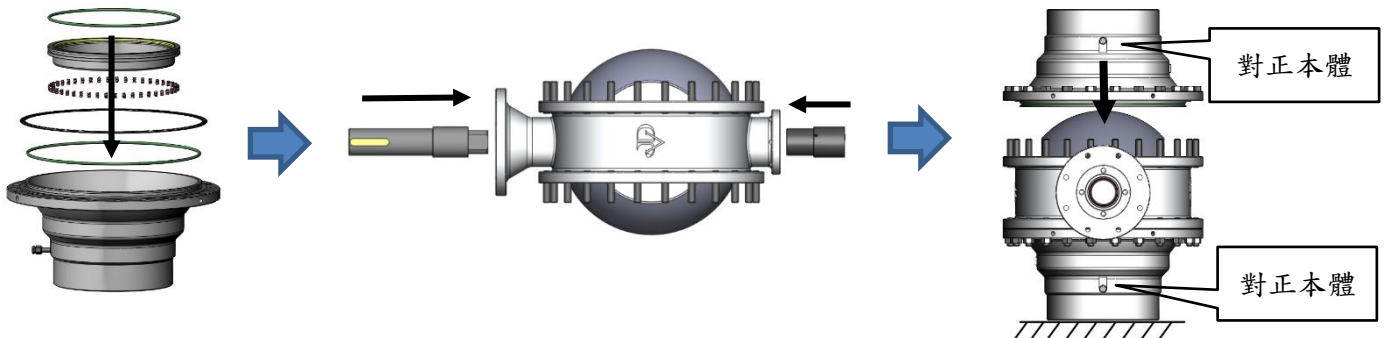
- (1) 先將一邊側蓋②的結合面朝上放置於平穩的軟墊上防止側蓋流道口損傷
- (2) 於兩側蓋②組裝球墊組⑧含 O-RING⑨及彈簧⑳，再安裝大薄片⑬與 O 型環⑩。
- (3) 將螺桿⑪組裝於本體①兩側，再從上/下軸端安裝各一個軸襯套⑰。
- (4) 將本體連同螺桿⑪放置於平穩的平面上,並將本體①墊高預留閥球③空間
- (5) 使閥球③於吊掛狀態時，將心軸④及支撐軸⑱由本體穿入閥球③，並確認心軸於關閉位置。

※請避免撞傷閥球

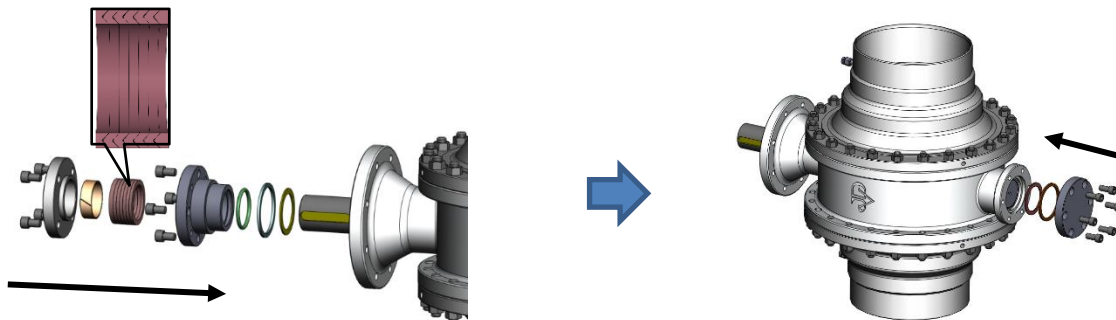
- (6) 將本體連同閥球③吊掛安裝於閥蓋②上，並注意閥體及蓋的對正位置。
- (7) 本體①及閥蓋②結合後用六角螺帽⑪先固定不鎖緊。
- (8) 再將另一邊側蓋②吊掛與本體①組裝，並注意閥體及蓋的對正位置。
- (9) 並依右圖示順序將兩側蓋六角螺帽⑪依扭力表鎖附(表1)。



- (10) 先開關一次閥門確認旋轉順暢，若有干涉或無法旋轉請依 5.5 步驟拆除檢視。



- (11) 從本體①中口放入軸墊片⑱及小薄片⑮
- (12) 將中軸壓板⑤安裝 O 型環⑲後一併組裝於閥體，再將內六角螺絲⑲，依扭力表鎖附(表 1)
- (13) 將 V 型中口填料⑭安裝於中軸壓板⑤內 **※請注意 V 口方向朝下**
- (14) 將壓蓋⑥連同壓蓋襯套⑰穿過心軸④，將內六角螺絲⑲，依扭力表鎖附(表1)
- (15) 依序安裝軸墊片⑱及小薄片⑮，再將下蓋⑦用內六角螺絲⑲，依扭力表鎖附(表 1)
- (16) 最後再開關作動閥門確認旋轉順暢，若有干涉或無法旋轉請依 5.5 步驟拆除檢視。



注意:吊掛拆除及組裝閥球時須注意防護，防止密封面撞傷或掉落從而導致潛在的洩漏風險，這將影響閥門保修。



**6、產品維護 ※請參照爆炸圖**

**6.1 定期開啟/關閉閥門：**

閥門長時間處於開啟或關閉位置，建議週期性循環一次，以確保閥門運行。

**6.2 檢查壓蓋螺絲⑭及結合面螺絲⑩：**

應定期檢查把手組下方壓蓋螺絲組⑭/及結合面螺栓/螺帽⑩，必要時請依(表1)扭力及鎖固順序進行調整鎖付後，並順時針在進行一次鎖付。

尺寸	結合面螺栓尺寸 (螺栓材質:A2-70)	扭力 單位：N-m	中口螺栓尺寸 (螺栓材質:A2-70)	扭力 單位：N-m
5"	M12x1.75	63	M12x1.75	20
6"	M12x1.75	63	M12x1.75	20
8"	M16x2.0	157	M16x2.0	40
10"	M20x2.5	308	M16x2.0	40
12"	M24x3.0	533	M16x2.0	40
14"	M20x2.5	308	M16x2.0	43

備註：以上參數使用潤滑脂摩擦係數：0.20，維修時請注意潤滑脂之摩擦係數，如有疑慮請通知進典

(表1)

**6.3 例行維修：**

保持日常維護以確保最佳密封功能，請參照表 1 中的扭矩緊固螺母，直至洩漏停止。

**7、故障排除**

區域	問題描述	解決方案
內漏	球與閥座密封面發生洩漏	<ol style="list-style-type: none"> <li>1. 請確認閥球③及球墊④密封面是否有損傷或刮痕。</li> <li>2. 確認球③或閥座④有受損，請更換。</li> <li>3. 14" 請改確認閥球③及球墊組⑧和 O-RING⑨。</li> </ol>
外漏	閥桿密封發生洩漏	<ol style="list-style-type: none"> <li>1. 鎖緊壓蓋螺絲組⑭，請參各規格扭力參照(表 1)。</li> <li>2. 如無法止漏，請更換 V 型中口填料⑧。</li> <li>3. 有必要每次拆卸時，更換小薄片⑨和 O-RING⑬。</li> <li>4. 14" 請改鎖緊壓蓋內六角螺絲⑮。</li> <li>5. 14" 每次拆卸時建議更換小薄片⑮ 和 O-RING⑰</li> </ol>
	閥體/閥蓋密封發生洩漏	<ol style="list-style-type: none"> <li>1. 鎖緊螺帽⑩請參照(表 1)。</li> <li>2. 如無法止漏，建議更換本體密封墊片⑪，及 O 型圈⑫。</li> <li>3. 14" 請改鎖緊螺帽⑩。</li> <li>4. 14" 結合面如無法止漏，建議更換大薄片⑬，及 O 型圈⑩。</li> </ol>

註:請參照 4.1/4.4/4.7 結構圖零件編號說明



