JDV CONTROL VALVES CO.,LTD.

Installation, Operation and Maintenance

2-PC Floating Type
Metal Seat Ball Valve

VERSION: V 1.1
ISSUING DATE: 2018/02/26

JBF-M
2-PC Floating Type Metal Seat Ball Valve
Instructions for Installation, Operation and Maintenance

Contents

Overview:

JBF-M: 2-PC floating metal seat ball valve
Features of the product comprise:

1. Anti-static device: Static is generated by obturator (ball) due to friction with fluid flow, and the static cannot be conducted to exterior of the body. With the design of anti-static device, static may be conducted to the exterior of the valve rapidly without explosion or fire event due to spark generated by static.

2. Blow-out proof stem design: The stem would fly out due to the pressure from the valve and result in industrial accident. The JBF series stem blow-out design has the stem penetrates from the interior of the valve without blow-out due to blocking of the valve.

3. Locking device design: The orientation of the ball valve may be locked to on or off position as a safety design to avoid hazard because of careless opening or closing.

4. Balanced pressure relief hole: The obturator (ball) is designed with pressure relief hole to balance the pressure in the valve cavity , and prolong the life of seat.

5. Variety valve seat coating: Stellite、CRC 、TC…

6. Uni & Bi direction design.

7. Fire safe test : ISO 10497 fire test approved.

8. ISO 5211 Standard interfaces for automated Valve Assemblies.

9. Variety of operation: lever、worm gear 、actuator..

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

Banner	Description
	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.

	Warning Do not get beyond the limitation indicated by valve specification or technical parameters, or otherwise, death or severe injury might be resulted.
	Caution 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.

Product Transportation/Storage/Maintenance

Warning

1. In moving or transportation, suitable tools have to be selected for correct equipment 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. Ball 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 lever of the manual valve to take or lift ball valve. In such a way, the lever of the manual valve would fractured or depart from the valve, such that damage or human injury might be resulted.

* 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:

Transportation

1. The openings on two sides of the ball 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.

Storage & Maintenance

- Preserving of Packed Ball Valve

1. Protect the pack adequately to prevent the pack from damage.

2. There should be warning banners for packs to guarantee that the moving of product would not result in unnecessary damage, such as suspending center of gravity

3. Flange surface and channel opening have to be protected on the surfaces of two sides of the ball valve using adequate sealing patch or cover to guarantee clean interior in the valve and prevent foreign objects from entry.

4. 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.

5. The storage site has to keep clean and dry.

6. Do not let the product to be exposed to wind/rain or to be sunned.

7. Please check preserving status regularly if the product is to be stored for a period of time.

Preserving of non-packed/unpacked ball valve

1. Please guarantee appropriate protection of the product in order to prevent it from damage.

2. In 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

Notes for Preparation of Installation

Please follow the following instruction guidelines to guarantee and prolong product life.

1. Please disassemble the pack (wooden case or pallet) carefully in order to prevent the product and cylinder and other components from damage.

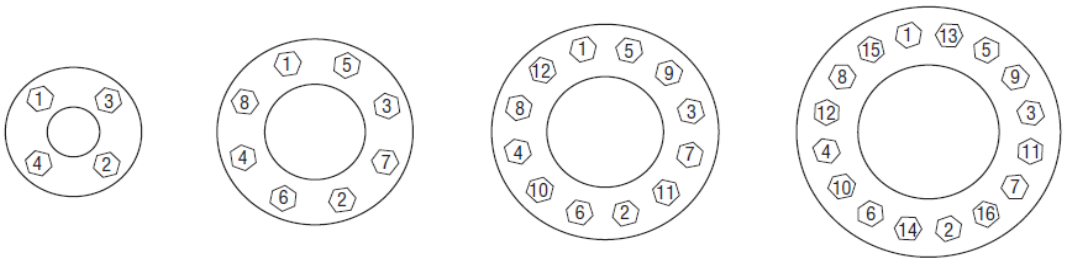
2. Before installation, remove the seal from flange opening for the air pipeline containing air filter to clean the interior of the ball valve. Make sure the clearance of foreign object inside.

3. Make sure that the mark on the nameplate is compliant with service condition.

4. Make sure that the flow direction on the body meets the direction of equipment pressure.

5. Make sure that all screws and nuts are secured.

6. In valve installation, please use wrench and follow diagonal sequence (Figure 1) to lock screws in order to prevent flange from deformation.



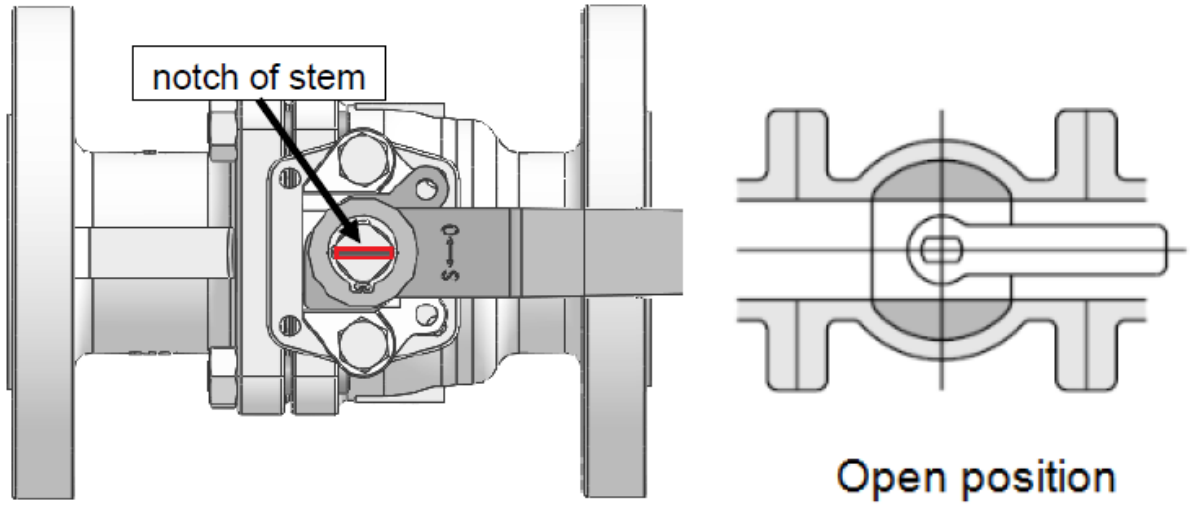
(Figure 1)

Notes prior to Operation

Manual Valve (Lever):

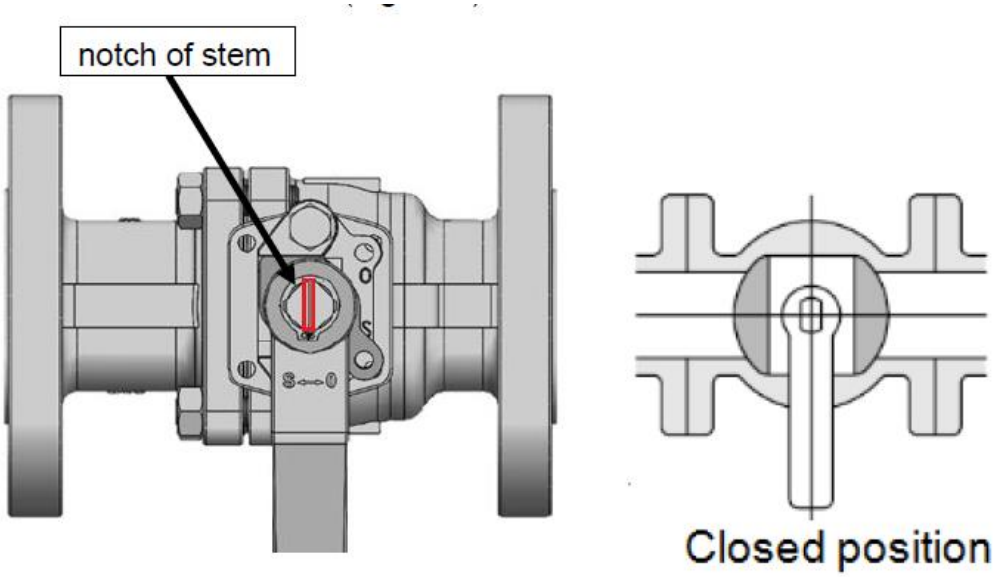
1. In manual operation, over or inadequate operation would damage lever or components, or result in indirect leakage.
2. Please identify that the opened or closed position of the ball valve is consistent with the notch direction on top of the stem, lever and pipeline.

* Opened position of ball valve – please identify that the notch direction on top of stem on the ball valve is parallel to the lever and pipeline, and the ball valve is in opened status. (Figure 2)



(Figure 2)

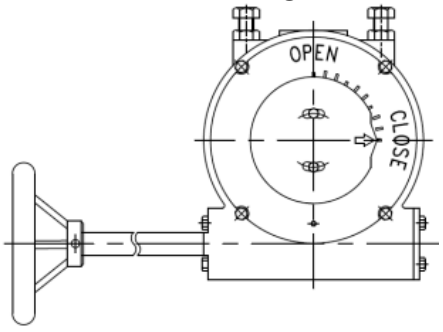
* Closed position of ball valve – please identify that the notch direction on top of stem on the ball valve is vertical to the lever and pipeline, and the ball valve is in closed status.
(Figure 3)



(Figure 3)

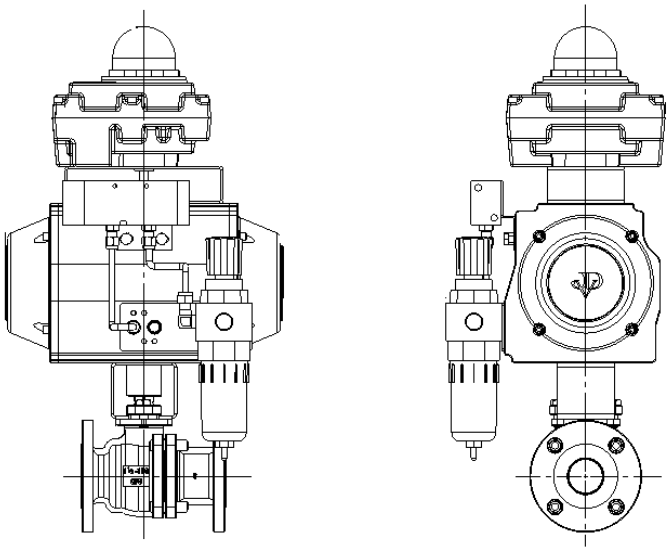
Manual Valve(GEAE BOX):

1. Please identify that the arrow on the gear box indicates the open position, the ball valve is in open status, the arrow points to closed position, and the ball valve is in closed status.
2. In gear operation, over and inadequate operation would cause damage to components of ball valve or result in leakage.



Pneumatic Ball Valve:

Please operate according to the instructions in the user manual of the cylinder manufacturer for the action valve to be opened or closed pneumatically.



Maintenance and Troubleshooting

Routine Maintenance

*Maintain routine maintenance and check to guarantee good operability.

Maintenance of gland filler

As the upper seal (stem) appears leakage, please fasten gland bolts uniformly until leakage stops.

For fastening torque, refer to the torque tables for each specification.

JIS 10K / ASME Class 150 / PN16

Size	Joint Bolt Size	Torque Unit :N-m	Gland Bolt Size	Torque Unit :N-m
1/2”	M8	20	M8	8
3/4”	M8	20	M8	8
1”	M10	40	M8	12
1-1/2”	M12	52	M10	18
2”	M12	52	M10	18
2-1/2”	M12	52	M10	22
3”	M12	52	M10	22
4”	M12	52	M12	25
6”	M16	120	M12	30

(Table 1)

JIS 20K / ASME CLASS300 / PN40

Size	Joint Bolt Size	Torque Unit :N-m	Gland Bolt Size	Torque Unit :N-m
1/2”	M8	20	M8	8
3/4”	M8	20	M8	8
1”	M10	40	M8	12
1-1/2”	M12	70	M10	18
2”	M12	70	M10	18
2-1/2”	M14	80	M10	22
3”	M16	160	M10	22
4”	M16	160	M12	25
6”	M20	240	M12	30

(Table 2)

ASME CLASS 600

Size	Joint Bolt Size	Torque Unit :N-m	Gland Bolt Size	Torque Unit :N-m
1/2”	M8	20	M8	8
3/4”	M10	40	M8	8
1”	M12	70	M8	12
1-1/2”	M14	80	M10	18
2”	M14	80	M10	18
2-1/2”	M20	240	M10	22
3”	M20	240	M10	22
4”	M20	240	M12	25

(Table 3)

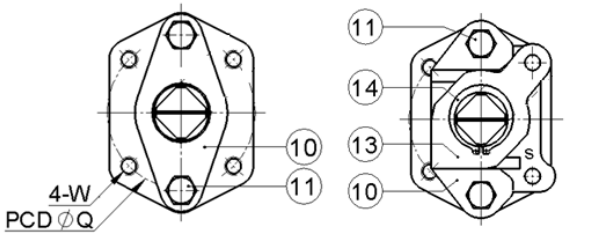
Troubleshooting

Area	Problem Description	Solutions
Internal Leaks	Leak at the surface of the ball	1. Please check whether the surface of ball (3) and valve seat (4A)(4B) have scratches or any damage. 2. Replace the seat gasket (5A) when the surface of ball and valve seat has not scratches or any damage. 3. Replace the ball (3) or valve seat (4A)(4B) when the surface of ball (3) and valve seat (4A)(4B) have scratches or any damage. 4. Disassemble it each time, need to replace the seat gasket (5).
External Leaks	Leak at the mouth of the stem	1. Fastening the gland bolts (15), please refer to the torque tables 1 to 3 for each specification. 2. Replace the stem packing (10) if leakage cannot stanch. 3. Disassemble it each time, need to replace the seat gasket (7).
	Leak at the joint face on the valve body	1. Fastening the bolts & nuts (8), please refer to the torque tables 1 to 3 for each specification. 2. Replace the body gasket (7) when leakage cannot stanch.

Note: Please refer to the description of numerals of parts in structure diagram.

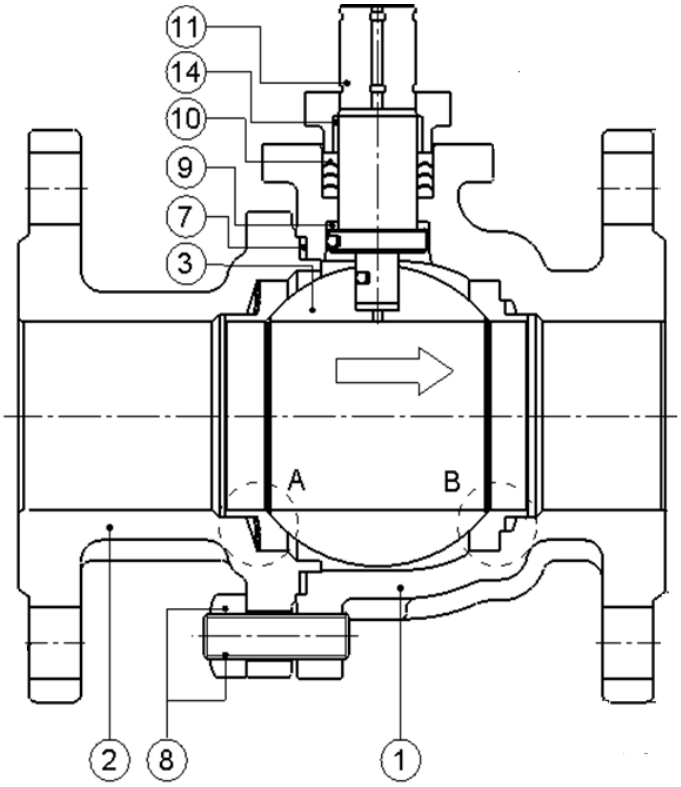
JBF-M Structure Diagram

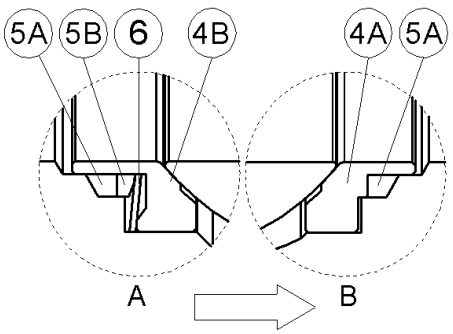
NO	PART
1	BODY
2	CAP
3	BALL
4A	BODY SEAT
4B	CAP SEAT
5A	SEAT GASKET
5B	SEAT RETAINER
6	SEAT SPRING
7	BODY GASKET
8	BOLT & NUT
9	THRUST WASHER
10	GLAND PACKING
11	STEM
12	GLAND
13	GLAND BOLT
14	GLAND BEARING
15	SNAP RING
16	TRAVEL STOP



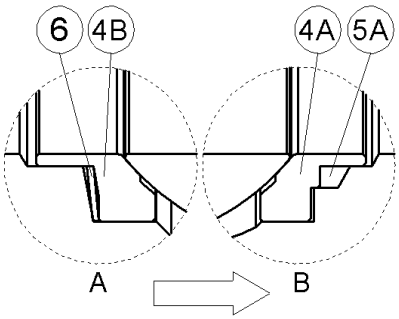
VIEW "X"
AUTO TYPE

VIEW "X"
MANUAL TYPE





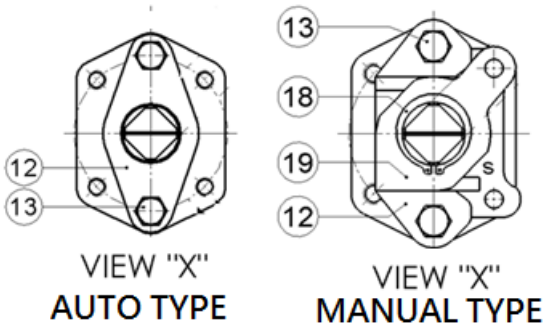
Bi-directional

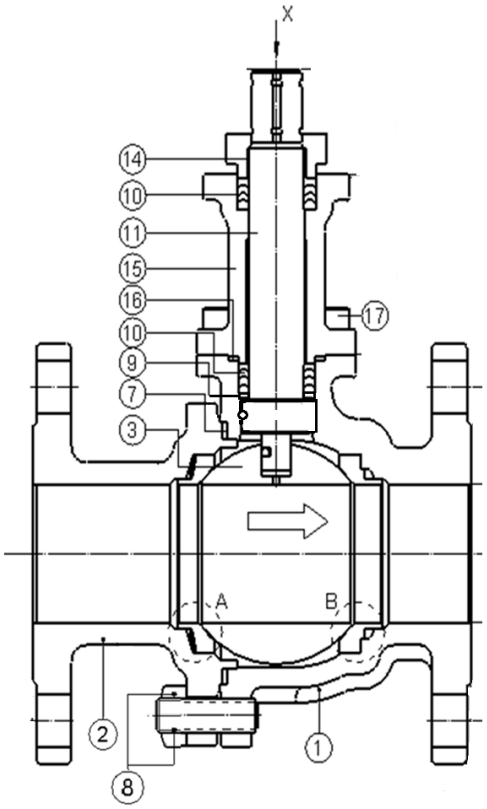


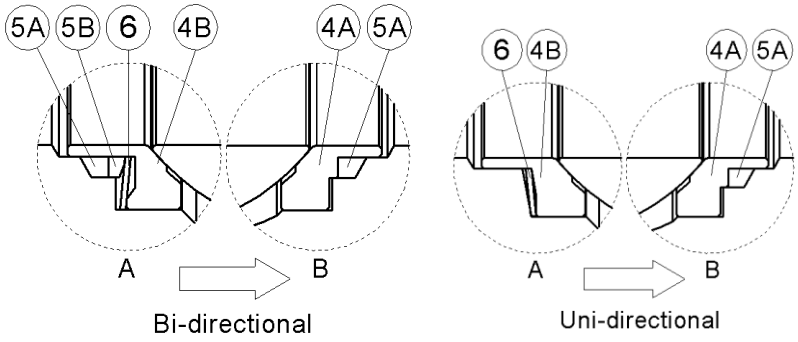
Uni-directional

JBF-M-EXTENDED Product Structure Diagram

NO	PART
1	BODY
2	CAP
3	BALL
4A	BODY SEAT
4B	CAP SEAT
5A	SEAT GASKET
5B	SEAT RETAINER
6	SEAT SPRING
7	BODY GASKET
8	BOLT & NUT
9	THRUST WASHER
10	GLAND PACKING
11	STEM
12	GLAND
13	GLAND BOLT
14	GLAND BEARING
15	BONNET
16	BONNET GASKET
17	BONNET BOLT
18	SNAP RING
19	TRAVEL STOP





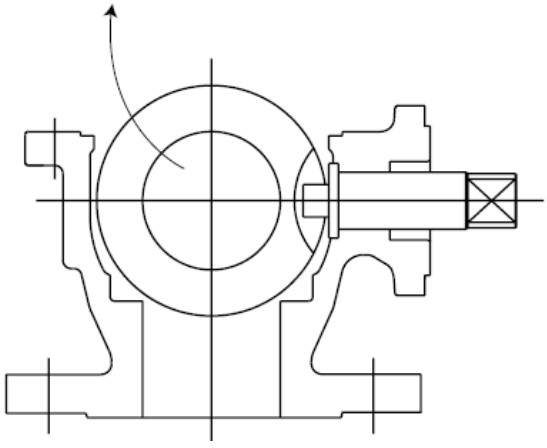


Procedure of Disassembling and Assemblage

	**Warning:** . 1. Prior to disassembling, the valve has to be at half-open position to guarantee full relief of pressure in ball chamber. 2. All harmful substances have to be guaranteed to be cleaned completely.
	Caution: 1. Disassembling product has to be operated by qualified operators. 2. Contact with JDV is recommended for maintaining and disassembling the product in order to avoid danger due to incorrect disassembling and assemblage.

JBF-M Disassembling Procedure

1. Turn the ball to closed position.
2. Loosen the bolt & nut (8), separate cap (2) from body (1).
3. Take out body gasket (7) and cap (2) ball gasket seat set (bi-directional - 5A/5B/6/4B) or (uni-directional - 6/4B) in order.
4. Identify that the ball valve is at closed position, and take out the ball (Figure 4).
   4.1 For manual valve, a clamp should be used to take off the snap ring (15) on the stem at first, followed by removing the handle. And then remove travel stop (16), and take off gland bolt (13), disassemble gland (12).
   4.2 For pneumatic ball valve, the gland bolt (13) is loosened directly, followed by disassembling the gland (12).
5. Knock on top of stem using rubber mallet, and draw the stem (11) out from the body.
6. Take out thrust washer (9), gland packing (10) and body seat/seat gasket (4A/5A) in order to complete disassembling.



(Figure 4)

Remarks:
The stem is designed to prevent flying-out to improve safety in system operation. The stem has to be taken out from the body.

JBF-M-EXTENDED Disassembling Procedure

1. Turn the ball to closed position.

2. Loosen bolt & nut (8) to separate cap (2) from body (1).

3. Take out body gasket (7) and cap ball gasket seat set (bi-directional - 5A/5B/6/4B) or (uni-directional 6/4B) in order.

4. Identify that the ball valve is at closed position, and take out the ball (Figure 4).

5. Disassemble bonnet bolt (17) to separate bonnet (15) from body (1) in order for bonnet gasket (16) to be taken out.

5-1. For manual valve, a clamp has to be used to take off snap ring (18) on bonnet/stem, remove handle/travel stop (19) and take off gland bolt (13) for gland (12) to be disassembled, such that gland packing (10) on mandrel can be removed.

5-2. For pneumatic ball valve, gland bolt (13) is loosened and taken off directly, and gland (12) is disassembled, followed by removing gland packing (10) on stem.

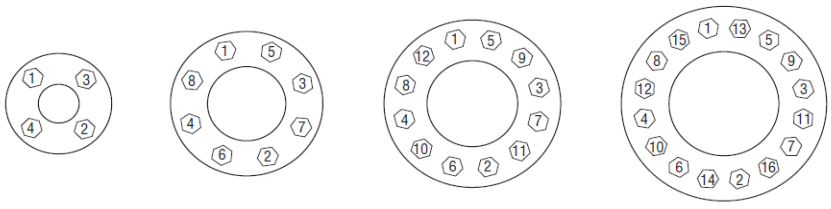
6. In taking stem (11) out from body, thrust washer (9) and gland packing (10) below stem could be taken out together.

7. Body seat/seat gasket (4A/5A) is taken out in order to complete disassembling.

JBF-M Assemblage Procedure

1. Seat gasket/body seat (5A/4A) is placed in body (1) in order.
2. Gland packing (10) is placed into body (1).
3. Thrust washer (9) is set into stem (11), and penetrated out from the interior of valve chamber to prevent packing (10) from damage.
4. Ball (3) is placed on body seat (4A) stably. Take care of the mounting direction of ball gutter and stem.
5. Body gasket (7) is placed into body carefully.
6. Bolt & nut is locked to screw hole of body / note that bolt & nut (8) has to penetrate out from body plane by 1 to 2 threads.
7. Bi-directional ball gasket seat set (5A/5B/6/4B) or uni-directional ball gasket seat set (6/4B) for cap is assembled into cap (2) in order.
8. Cap assembling unit and body assembling unit are combined, bolts are fastened diagonally in order (Following Figure 5) with fastening torques referenced to Tables 1 to 3.
9. Let gland (12) penetrate through stem (11), followed by fastening gland bolt (13) in order. Please refer to Tables 1 to 3.
10. Please identify smooth action of ball valve for the pneumatic ball valve to complete assemblage procedure.
11. For manual ball valve, travel stop (16) is placed on gland bolt (13) in order.

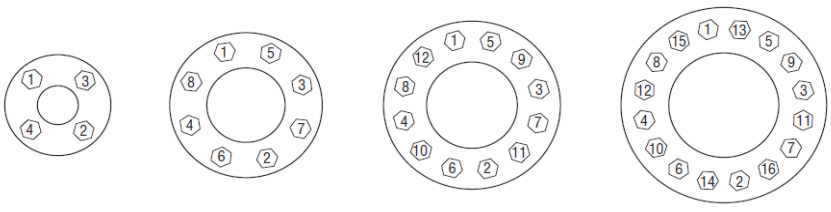
    Please identify the compliance of open/closed position of travel stop (16) with open/closed status of ball valve. Snap ring (15) is placed into groove of stem (11) using tools, followed by assembling handle on stem (11) to complete the assemblage procedure.



(Figure 5)

JBF-M-EXTENDED Assemblage Procedure

1. Body ball gasket set (5A/4A) is placed into body (1).
2. Thrust washer (9), gland packing (10) and stem (11) are mounted in order.
3. Stem set in step 2 is mounted in body (1) downwards.
4. Bonnet gasket (16) is taken to be placed on body (1).
5. Bonnet (15) is assembled, bonnet (15) penetrates through stem (11) to be combined with (1), and bonnet bolt (17) is fastened.
6. Packing (10) on stem is set into stem (11). It is placed into bonnet (15) to prevent stem packing (10) form damage.
7. Ball (3) is placed on body seat (4A) stably. Take care of mounting direction of ball gutter and stem (11).
8. Body gasket (7) is placed into body (1) carefully.
9. Bolt & nut (8) is locked to body screw hole / note that the bolt & nut (8) has only to penetrate through body plane by 1 to 2 threads.
10. Cap bi-directional ball gasket set seat (5A/5B/6/4B) or uni-directional ball gasket seat set (6/4B) is assembled in order into cap (2).
11. Cap assembling unit and body assembling unit are combined, followed by fastening nuts diagonally in order (Figure 5) with fastening torques referenced to Tables 1 to 3.
12. Gland (12) penetrates through stem (11), followed by fastening gland bolt (13) in order. Please refer to Tables 1 to 3.
13. Please identify smooth action of ball valve to complete pneumatic valve assemblage procedure.
14. For manual ball valve, bonnet gasket (16) is placed on gland bolt (13) in order. Please identify the compliance of open/closed position of travel stop (19) with open/closed status of ball valve. Bonnet (15) is placed into stem (11) using tools, followed by assembling handle onto stem (11) to complete the assembling procedure.



(Figure 5)

進典工業股份有限公司
JDV CONTROL VALVES CO.,LTD.

二片浮動式金屬硬密封球閥
安裝、操作和維護手冊

版本:V 1.1
發行日期:2018/02/26

JBF-M

二片浮動式金屬硬密封球閥

安裝操作維修手冊

目錄

概述

JBF-M 為進典公司二片式浮動金屬硬密封球閥
產品特點包含:

產品特點:

1. **防靜電裝置：**閥球因流體流動摩擦產生靜電，無法將靜電傳導至閥體外部。經由防靜電裝置之設計，可迅速將靜電傳導至閥體外部，避免因靜電產生火花，而導致爆炸火災事件發生。

2. **閥桿防飛出裝置：**舊式閥桿為由外部裝入閥體，當閥體內部有壓力，且螺絲異常鬆脫時，中軸會因閥體內部壓力而飛出，導致工安事件發生。JDV 設計，為由閥體內部穿出，因受閥體限位，可防止閥桿因壓力作用噴出。

3. **掛鎖設計：**可將球閥方向鎖定在開或關的位置，避免人為誤觸更改開關位置。

4. **平衡式洩壓孔：**球頂端採用洩壓孔設計，閥體內腔壓力及管內壓力，因洩壓孔使壓力可以雙向流動自動產生平衡，避免內腔壓力及管內壓力壓迫球墊，延長球墊壽命。

5. **表面硬化層處理**:HCR 、 STELLITED 、CRC 、 TC….

6. **閥座設計**:單/雙向雙閥座設計

7. **防火認證：**取得 ISO 10497 防火認證。

8. **裝配平台**: ISO 5211 國際標準裝配平台孔

9. **多樣的驅動裝置：**電動/氣動驅動器、齒輪/手把開啟。

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 Banner	說明 Description
	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，已確保使用的安全。
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。

	警告: 請不要超出閥門規格或技術參數表所示的之限值。如果不避免，可能導致死亡或嚴重傷害。
	注意: 閥門可用於室內或室外。如在暴露大氣環境中使用,因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

警告:

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。
2. 吊升和處理球閥，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。
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。
4. 請勿將手動閥之把手做為拿取或吊升球閥用，會使手動閥之把手折斷或與閥斷開分離，可能導致毀壞或人員傷害。

※ 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. 球閥兩側端面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。

保存及維護

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，已確保產品移動時造成不必要之損壞.如:吊掛重心。
3. 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。
4. 閥體材質若為易鏽件須於法蘭表面與流道口塗上防鏽油，實施防護避免鏽斑產生。
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。

保存未包裝/已拆裝球閥

1. 處理已拆裝球閥，確保產品做適當保護,以避免產品之損壞。

2. 當處理大尺寸閥門時，應把產品安全穩固的固定好，使用適當的工具（托架、掛鉤、緊固物、繩索）搬運，移動時要保持平衡以避免搬運的過程中掉落或晃動，造成產品損壞。

安裝準備須知

請依照遵守以下的操作指南，以確保及延長產品壽命。

1. 請小心拆卸包裝(木箱或棧板..)，避免造成產品及氣缸或其他零配件的損壞。

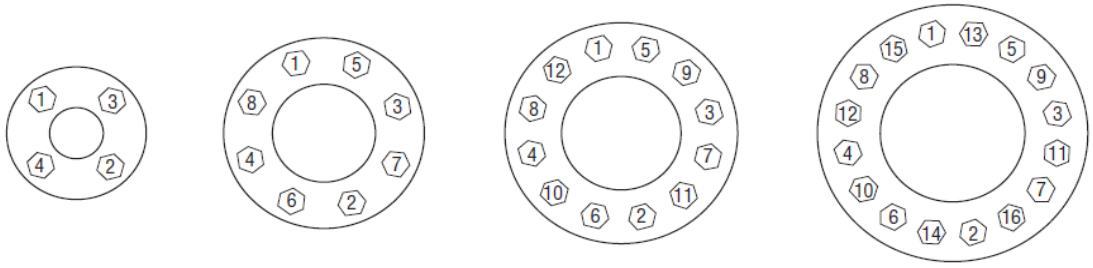
2. 安裝前，將法蘭的密封件移除，使用含有空氣過濾器之空氣管線清理球閥的內部。確保無異物在內。

3. 確認銘板上的標示適用於使用工況。

4. 請確認閥體上的流向符合設備壓力的方向。

5. 確認閥門所有螺絲及螺帽於鎖緊狀態。

5. 安裝閥門，請使用鎖附工具並遵循對角順序(圖一)鎖附螺絲，以避免法蘭變形。



(圖一)

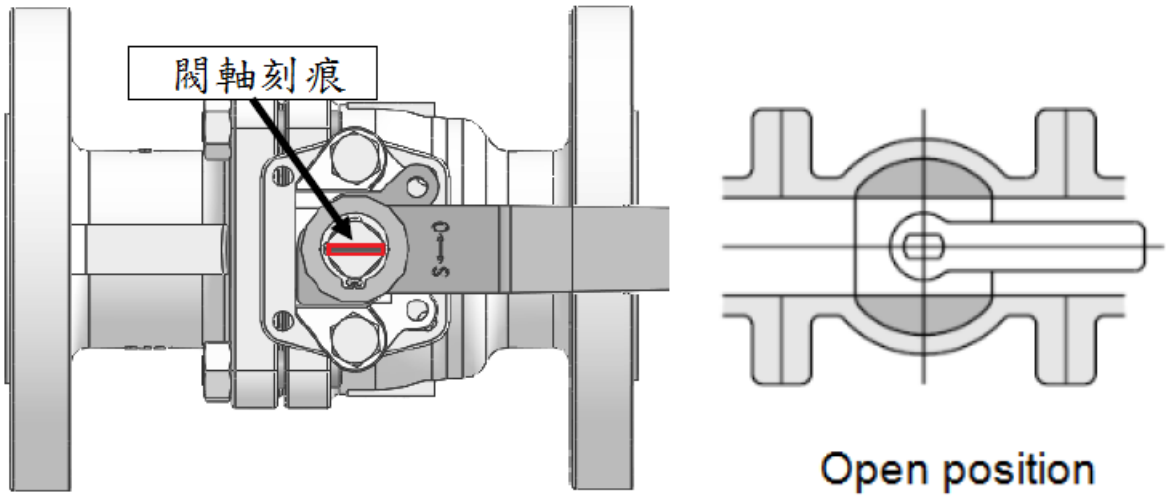
操作前須知

手動閥門:

1.當手動操作時，過度及不適當操作會造成把手或零組件損壞或間接造成洩漏發生。

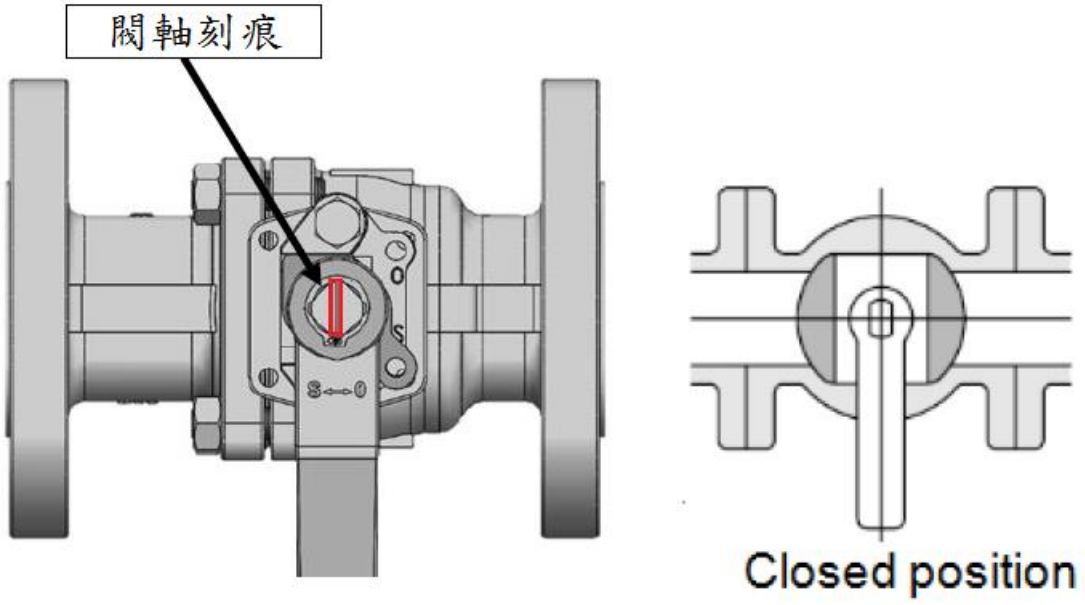
2. 請確認球閥開啟或關閉位置是否與閥軸頂部刻痕方向、把手、管道一致。

※ 球閥開啟位置 -- 請確認球閥上之閥軸頂部刻痕方向及把手與管道平行，球閥為開的狀態。(圖二)



(圖二)

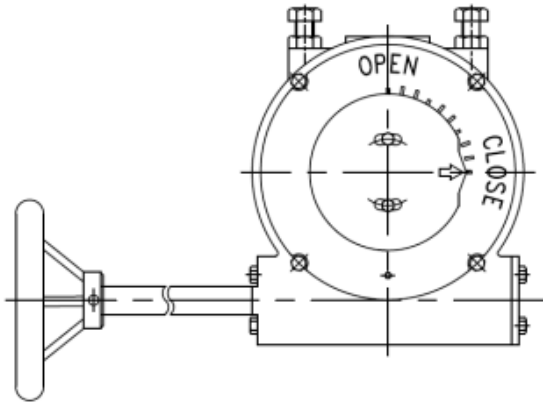
※ 球閥關閉位置 -- 請確認球閥上閥閥軸頂部刻痕方向及把手與管道成垂直，球閥為關的狀態。(圖三)



(圖三)

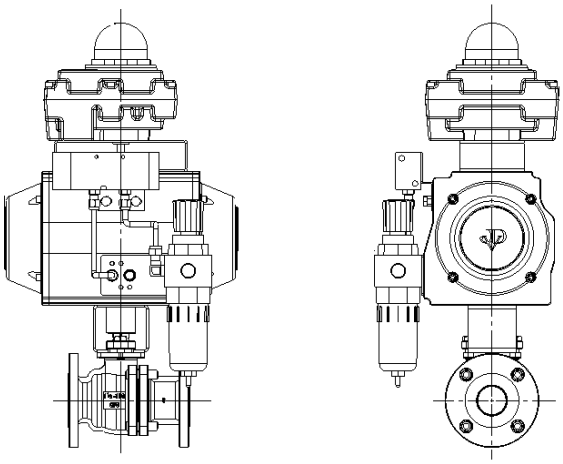
齒輪箱閥門:

1. 請確認齒輪箱上箭頭指示於開位置，球閥須處於開啟狀態，箭頭於關位置，球閥須處於關閉狀態。
2. 當手動操作時，過度及不適當操作會造成球閥零組件之損壞或間接造成洩漏發生。



氣動球閥:

氣動開關動作閥門，請按照氣缸製造商說明書指示操作。



維護與問題排除

日常維護

※ 維持例行性維護及檢查，以確保良好操作性。

壓蓋填料維護

上密封(閥桿)有洩漏的現象,請均勻地鎖緊壓蓋螺絲直至止洩為止。

鎖緊扭力請參照以下各規格之扭力表。

JIS 10K / Class 150 / PN16

閥門尺寸	結合面螺絲	扭力 單位:N-m	壓蓋螺絲	扭力 單位:N-m
1/2”	M8	20	M8	8
3/4”	M8	20	M8	8
1”	M10	40	M8	10
1-1/2”	M12	52	M10	15
2”	M12	52	M10	15
2-1/2”	M12	52	M10	18
3”	M12	52	M10	22
4”	M12	52	M12	22
6”	M16	120	M12	25

(表一)

JIS 20K / ASME Class 300 / PN40

閥門尺寸	結合面螺絲	扭力 單位:N-m	壓蓋螺絲	扭力 單位:N-m
1/2”	M8	20	M8	8
3/4”	M8	20	M8	8
1”	M10	40	M8	10
1-1/2”	M12	70	M10	15
2”	M12	70	M10	15
2-1/2”	M14	80	M10	18
3”	M16	160	M10	22
4”	M16	160	M12	22
6”	M20	240	M12	25

(表二)

ASME Class 600

閥門尺寸	結合面螺絲	扭力 單位:N-m	壓蓋螺絲	扭力 單位:N-m
1/2”	M8	20	M8	8
3/4”	M10	20	M8	8
1”	M12	40	M8	10
1-1/2”	M14	52	M10	15
2”	M14	52	M10	15
2-1/2”	M20	52	M10	18
3”	M20	52	M10	22
4”	M20	52	M12	22

(表三)

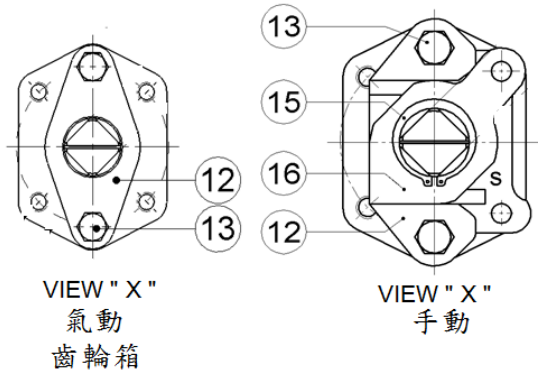
故障排除

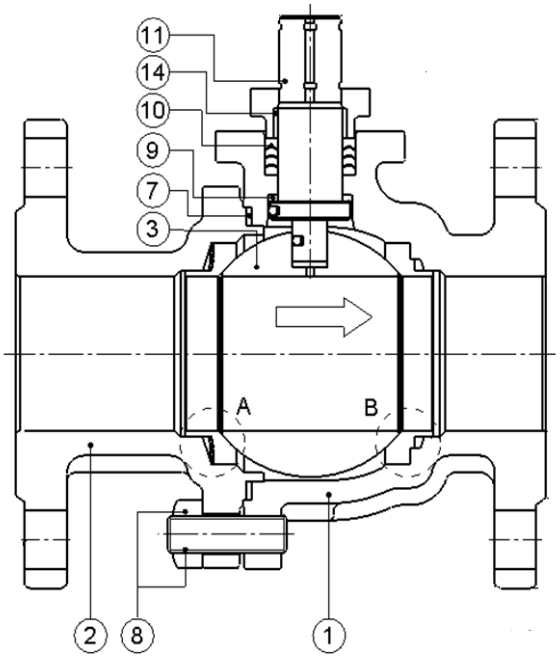
區域	問題描述	解決方案
內漏	密封面洩漏發生	1. 請確認閥球 (3)及閥座 (4A)(4B)密封面是否有損傷或刮痕 2. 如無損傷，請更換密封件(5A)。 3. 如閥球(3)或閥座(4A)(4B)受損，更換受損閥球(3)或閥座(4A)(4B)。 4. 每次拆卸時，有必要更換閥座密封墊片(5A)。.
外漏	閥桿密封發生洩漏	1. 鎖緊壓蓋螺絲(15)請參各規格扭力參照(表一~三) 2. 如無法止漏，請更換閥軸填料(10)。 3. 每次拆卸時，有必要更換球閥密封墊片(7)。
	閥體密封發生洩漏	1. 鎖緊螺帽 (8)請參照(表一~表三) 2. 如無法止漏，請更換結合面之閥體密封墊片(7)

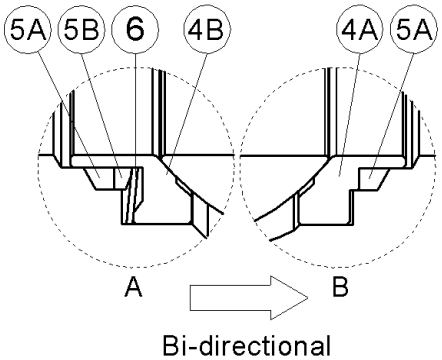
註:請參照結構圖零件編號說明

JBF-M 結構圖

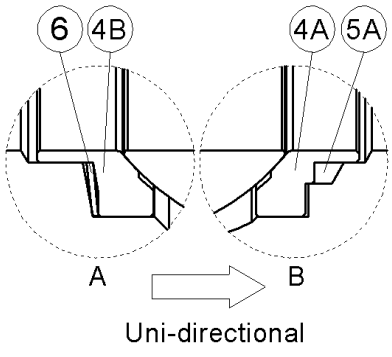
編號	配件
1	閥體
2	閥蓋
3	閥球
4A	閥體閥座
4B	閥蓋閥座
5A	閥座密封件
5B	閥座密封壓環
6	彈片
7	閥體密封墊片
8	牙桿及螺帽
9	閥桿潤滑墊片
10	閥桿填料
11	閥桿
12	填料壓蓋
13	填料壓蓋螺絲
14	填料壓蓋襯套
15	扣環
16	檔片







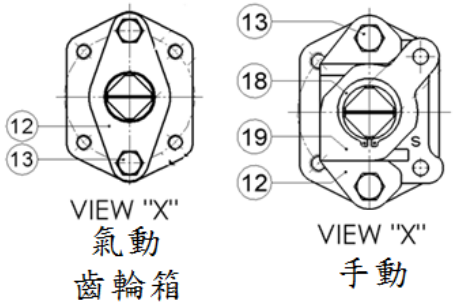
Bi-directional

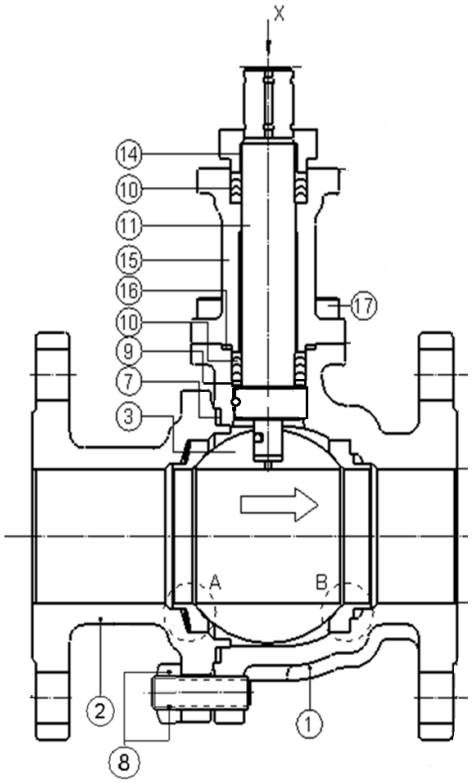


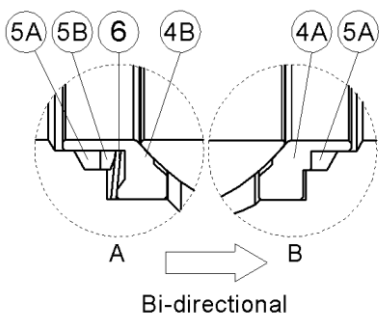
Uni-directional

JBF-M-EXTENDED 結構圖

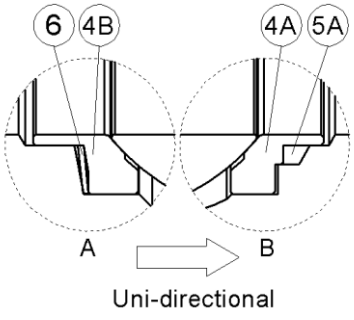
編號	配件
1	閥體
2	閥蓋
3	閥球
4A	閥體閥座
4B	閥蓋閥座
5A	閥座密封件
5B	閥蓋閥座壓環
6	彈片
7	閥體密封墊片
8	牙桿及螺帽
9	閥桿潤滑墊片
10	閥桿填料
11	閥桿
12	填料壓蓋
13	填料壓蓋螺絲
14	填料壓蓋襯套
15	加長閥桿軸套
16	加長閥桿軸套墊片
17	加長閥桿軸套螺絲
18	扣環
19	檔片







Bi-directional



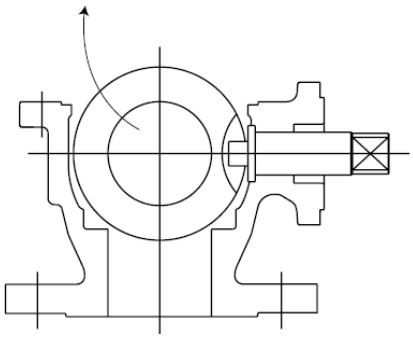
Uni-directional

拆卸與組裝程序

	警告: 1.拆卸前，閥必須在半開的位置，以確保球腔壓力已完全釋放. 2.必須確保任何有害的物質已清除乾淨
	注意:: 1.拆裝產品，須由符合操作資格的人員拆裝。 2.維修拆裝產品，建議與 JDV 聯絡，以免不正確拆裝及組裝，發生危險。

JBF-M 拆裝程序

1.旋轉球至關的位置。
2.鬆開螺帽(8)，將閥蓋(2)，與閥體(1)分開。
3.依序取出閥體密封墊片(7)、閥蓋(2)、閥座組(雙向-5A/5B/6/4B)或(單向-6/4B)。
4.確認球閥於關的位置，將閥球(3)取出(圖四)。
  4.1 球閥為手動球閥，須先用工具拿開閥軸上的扣環(15)，移除把手。
    移除檔片(16)，並拿掉填料壓蓋螺絲(13)，拆卸填料壓蓋(12)。
  4.2 球閥為氣動球閥，直接將填料壓蓋螺絲(13)鬆開，拆卸填料壓蓋(12)。
5.用塑膠槌輕敲閥桿頂部，並將閥桿(11)從閥體抽出來。
6.依序將閥桿潤滑墊片(9)及閥桿填料(10),閥體球墊座組(4A/5A)取出。
  即完成拆卸。



(圖四)

備註：閥軸為防飛出設計以改進系統操作時的安全性。閥軸必須自閥體取出。

JBF-M-EXTENDED 拆裝程序

1.旋轉球至關的位置。

2.鬆開螺帽(8)，將閥蓋(2)與閥體(1)分開。

3.依序取出閥體密封墊片(7)及閥蓋端閥座組(雙向-5A/5B/6/4B)或(單向-6/4B)。

4.確認球閥於關的位置，將閥球(3)取出(圖四)。

5.拆卸加長閥桿軸套螺絲(17)，將加長閥桿軸套(15)與閥體(1)分開。

即可取出加長閥桿軸套墊片(16)

5-1.球閥為手動球閥-須先用工具拿開軸套閥桿上的扣環(18)，移除把手/檔片(19)並拿掉填料壓蓋螺絲(13)，拆卸填料壓蓋(12)，就可移除心軸上端閥桿填料(10)。

5-2 球閥為氣動球閥-直接將填料壓蓋螺絲(13)鬆開拿掉，拆卸填料壓蓋(12)，再移除閥桿上端閥桿填料(10)。

6.閥桿(11)從閥體取出時，可一併將墊片(9)及閥桿下端閥桿填料(10)取出。

7.依序將閥體球閥座組(4A/5A)取出。即完成拆卸。

JBF-M 組裝程序

1.依序將閥體閥座組(5A/4A)放入閥體(1)內。

2.閥桿填料(10)放入閥體(1)。

3.閥桿潤滑墊片(9)套入閥桿(11)，將閥桿(11)由閥腔內部穿出,避免閥桿填料(10)受損。

4.將閥球(3)平穩放置閥座(4A)上，注意球溝與閥軸裝配方向。

5.小心將閥體密封墊片(7)置入閥體。

6.將牙桿(8)鎖於閥體螺絲孔，注意牙桿(8)需出穿本體平面 1~2 牙。

7.組裝閥蓋端雙向球閥座組(5A/5B/6/4B)或單向閥座組(6/4B)依序組入閥蓋(2)。

8.將閥蓋端組合件與閥體組合件結合，依序對角將螺帽鎖緊(圖一)，鎖緊扭力參照(表一~三) 。

9.將填料壓蓋(12)穿過閥桿(11)，將填料壓蓋螺絲(13)依序鎖緊。
請參照(表一~三)

10.請確認球閥作動是否順暢，氣動球閥即完成組裝程序。

11.手動球閥—依序將檔片(16)放置壓蓋(13)上,請確認檔片(16)開關位置，是否與球閥開關狀態符合。使用工具，將 C 形扣環(15)放置閥軸(11)溝槽內，組裝把手於閥軸(11)上即完成組裝程序。

JBF-M-EXTENDED 組裝程序

1.將閥體閥座組 (5A/4A)放入閥體(1)內。

2.依序將閥閥桿潤滑墊片(9)、閥桿填料(10) 與閥桿(11)裝配。

3.將步驟 2-閥桿組往下裝配於閥體(1)內。

4.再取加長閥桿軸套密封墊片(16)放置於閥體(1)。

5.組裝加長閥桿軸套(15)，將加長閥桿軸套(15)穿過閥桿(11)，與閥體(1)組合，鎖緊加長閥桿軸套螺絲(17)。

6.將閥桿填料(10)套入閥桿(11)，放置於軸套內(15),避免閥桿填料(10)受損。

7.將閥球(3)平穩放置閥座(4A)上，注意球溝與閥桿(11)裝配方向。

8.小心的將閥體密封墊片(7)置入閥體(1)。

9.將牙桿(8)鎖於閥體螺絲孔/注意牙桿(8)需出穿閥體平面 1~2 牙。

10.組裝閥蓋端雙向閥閥座(5A/5B/6/4B)或單向閥座組(6/4B)依序組入閥蓋端(2)。

11.將閥蓋端組合件與閥體組合件結合，依序對角將螺帽鎖緊(圖一)，鎖緊扭力參照 (表一~三)

12.將填料壓蓋(12)穿過閥桿(11)，將填料壓蓋螺絲(13)依序鎖緊。
請參照(表一~三)

13.請確認球閥作動是否順暢，氣動球閥即完成組裝程序

14.手動球閥 -- 依序將檔片(16)放置填料壓蓋(12)上,請確認擋片(19)開關位置，是否與球閥開關狀態符合。使用工具，將扣環(18)放置閥桿(11)溝槽內，組裝把手於閥桿上(11)即完成組裝程序。