JDV CONTROL VALVES CO.,LTD.

Installation, Operation and Maintenance
Floating type metal seat steam jacketed ball valve

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JBF-KM

Floating type metal seat steam jacketed ball valve
Instructions for Installation, Operation and Maintenance

Contents

Overview

JBF-KM is a floating type metal seat steam jacketed ball valve of JDV. The main design features is to meet and maintain the requirements of fluid temperature during a specific temperature operation. It can be matched to varieties of seat material and applied to a wide range of environmental conditions.

Features of the product comprise:

1. One-piece Valve body design: To prevent the joint leak of multi-pieces valve body.

2. Full-circular steam jacketed design: By filled with heating medium to the steam jacketed, it can maintain the requirements of fluid temperature during a specific temperature operation.

3. Anti-static device: Static is generated by valve 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.

4. Valve stem anti-fly device (2-1/2" above): Old stem is installed in valve from outside. As there is pressure in the valve, and screw is loosened exceptionally, the stem would fly out due to the pressure from the valve and result in industrial accident. The new stem anti-fly design has the stem penetrates from the interior of the valve without flying out due to blocking of the valve.

5. Metal seat: INCONEL X-750 shrapnel is used for the valve seat to achieve automatic sealing.

6. Balanced pressure relief hole: The ball top is designed with pressure relief hole to balance the pressure in the inner chamber of the valve, and prolong the life of ball pad.

7. Diversified driving device: electrical/pneumatic driver using gear/handle for opening.

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 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. 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 handle of the manual valve to take or lift ball 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.

* 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.

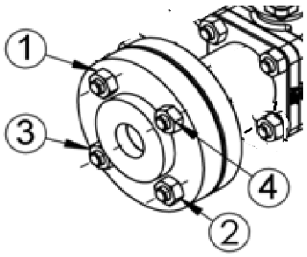
4. Make sure that the flow direction on the body meets the direction of equipment pressure.

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

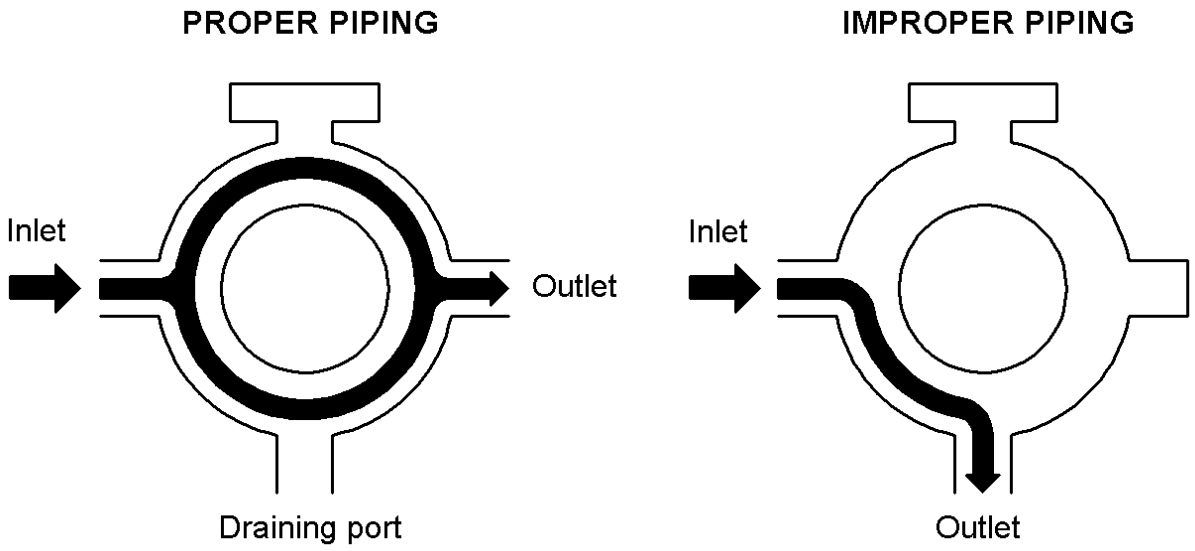
6. In valve installation, please use wrench and follow diagonal sequence (Figure 1) to lock screws in order to prevent flange from deformation.

7. Before install the valve, please make sure the flange size on two sides of the Valve and the nominal sizes of bore of the valve.

8. When install the valve, please make sure the clearance of foreign object in inlet or outlet of jacketed. Proper heating medium flow direction allows efficient temperature keeping effect (Figure 2).



(Figure 1)



(Figure 2)

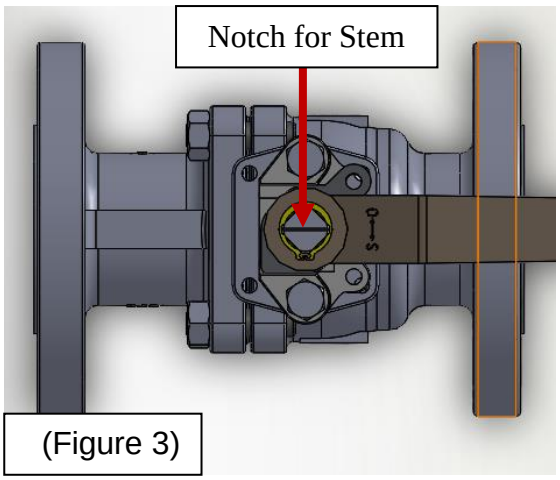
Notes prior to Operation

Manual Valve:

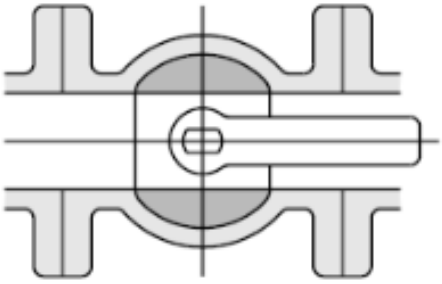
1. In manual operation, over or inadequate operation would damage handle or components, or result in indirect leakage.

2. Please identify that the opened or closed position of the ball valve is consistent with the notch direction on top of the stem, handle and channel.

* Opened position of ball valve – please identify that the notch direction on top of stem on the ball valve is parallel to the handle and channel, and the ball valve is in opened status (Figure 3).

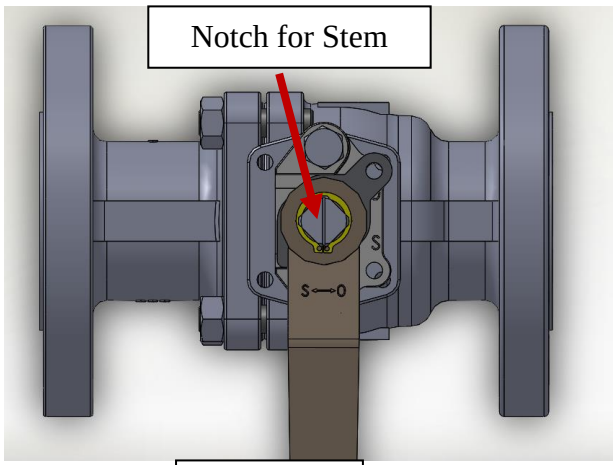


(Figure 3)

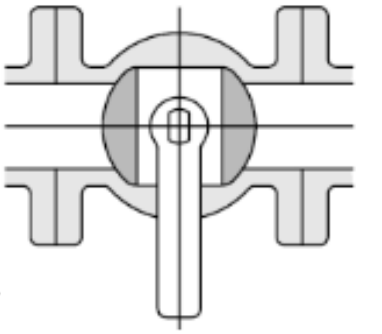


Open position

* Closed position of ball valve – please identify that the notch direction on top of stem on the ball valve is vertical to handle and channel, and the ball valve is in closed status (Figure 4).



(Figure 4)

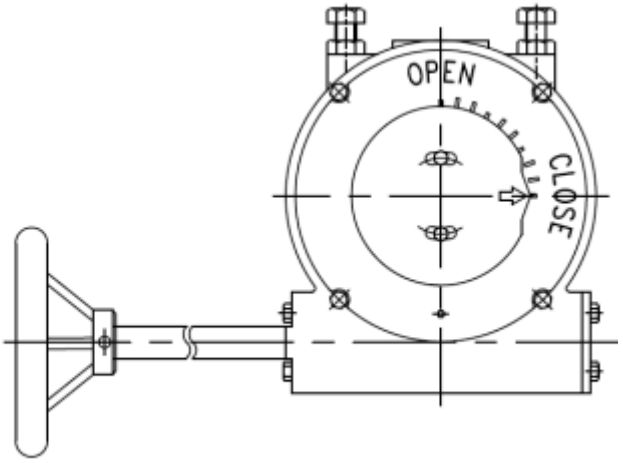


Closed position

Valve of Gear Box:

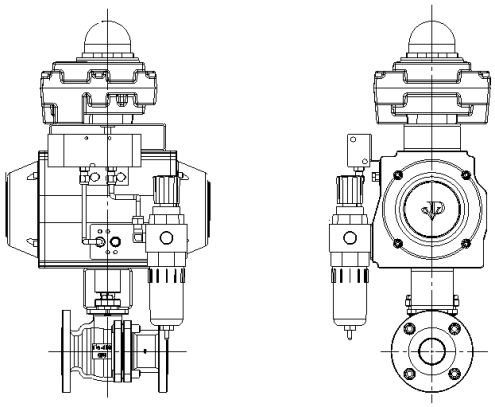
1. Please identify that the arrow on the gear box indicates the open position, the ball valve is in open status, the arrow points to closed position, and the ball valve is in closed status.

2. In manual operation, over and inadequate operation would cause damage to components of ball valve or result in leakage.



Pneumatic Ball

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

* 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/ANSI 150LB /PN16

Size	Gland Bolt Size	Torque Unit :N.m
1/2”	M8	8
3/4”	M8	8
1”	M8	10
1-1/2”	M10	15
2”	M10	15
2-1/2”	M10	18
3”	M10	22
4”	M12	22
6”	M12	25

(Table 1)

JIS 20K/ANSI 300LB /PN40

Size	Gland Bolt Size	Torque Unit :N.m
1/2”	M8	8
3/4”	M8	8
1”	M8	10
1-1/2”	M10	15
2”	M10	15
2-1/2”	M10	18
3”	M10	22
4”	M12	22
6”	M12	25

(Table 2)

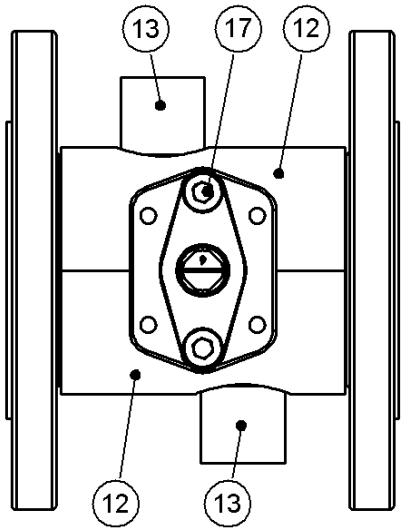
Troubleshooting

Area	Problem Description	Solution
Internal Leaks	Leak at the surface of the ball	1. Please check whether the surface of ball (2B) and valve seat (3B) have scratches or any damage. 2. Replace the seat gasket (3C) when the surface of ball and valve seat have not scratches or any damage. 3. Replace the ball (2B) or valve seat (3B) when the surface of ball (2B) and valve seat (3B) 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(17), please refer to the torque tables 1 to 2 for each specification. 2. Replace the stem packing (10) if leakage can not stanch.

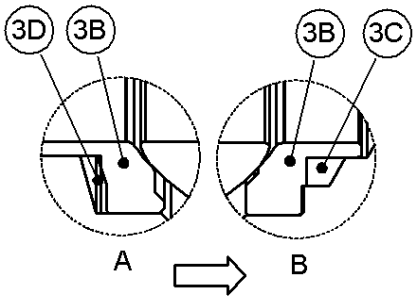
Note: Please refer to the description of numerals of parts in structure diagram.

JBF-KM Structure Diagram

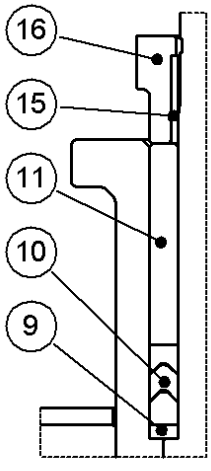
Bore size: DN15 to DN200 (1/2”~8”)
Flange size: DN40 to DN300 (1-1/2”~12”)



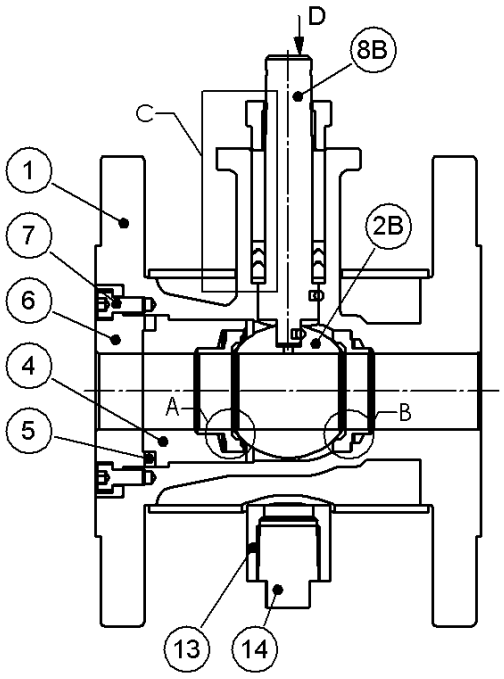
VIEW D



Uni-directional



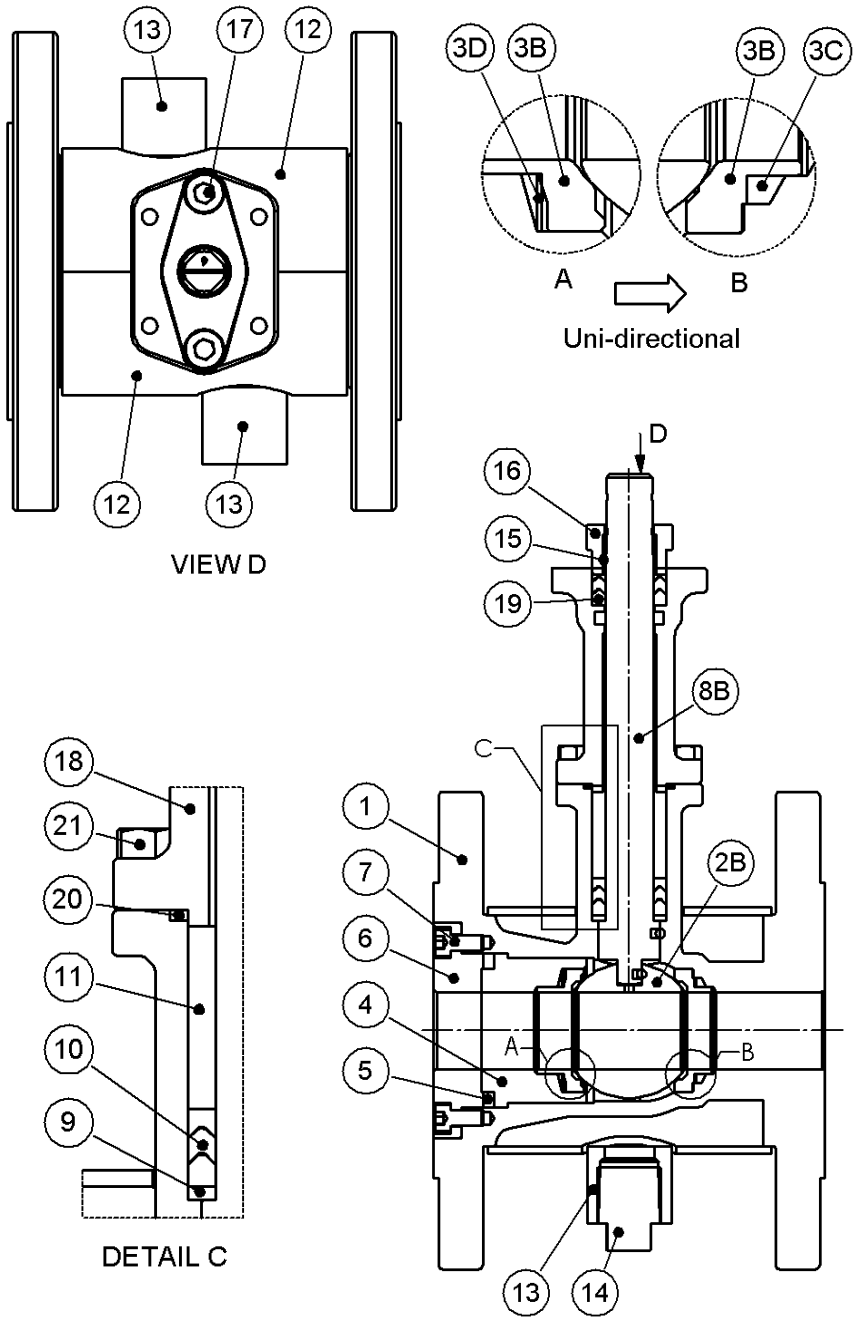
DETAIL C



NO	PART NAME
1	BODY
2B	BALL
3B	SEAT
3C	GASKET
3D	SEAT SPRING
4	SEAT SUPPORT
5	BODY GASKET
6	CAP
7	BOLT
8B	STEM
9	THRUST WASHER
10	GLAND PACKING
11	RING
12	JACKETED
13	COUPLING
14	PLUG
15	GLAND BEARING
16	GLAND
17	GLAND BOLT

JBF-KM-EXTENDED Structure Diagram

Bore size: DN15 to DN200 (1/2”~8”)
Flange size: DN40 to DN300 (1-1/2”~12”)



NO	PART NAME
1	BODY
2B	BALL
3B	SEAT
3C	GASKET
3D	SEAT SPRING
4	SEAT SUPPORT
5	BODY GASKET
6	CAP
7	BOLT
8B	STEM
9	THRUST WASHER
10	GLAND PACKING
11	RING
12	JACKETED
13	COUPLING
14	PLUG
15	GLAND BEARING
16	GLAND
17	GLAND BOLT
18	BONNET
19	BONNET PACKING
20	BONNET GASKET
21	BONNET BOLT

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-KM Disassembling Procedure

1. Turn the ball to closed position.

2. Loosen the **BOLT (7)** and take out **CAP (6)**.

3. Take out **SEAT SUPPORT (4)**, **BODY GASKET (5)**, **SEAT (3B)** and **SEAT SPRING (3D)** referencing structure diagram detail A.

4. Take out **BALL (2B)**.

   ※If there is a tight fit between the parts, leading to disassembly inconveniently. Please use tools of soft materials (non-metallic) to knock and separate parts preventing part from damage.

5. Loosen the **GLAND BOLT (17)** and take out **GLAND (16)** and **GLAND EARING (15)**.

6. Draw the **STEM (8B)** out from the body together with **THRUST WASHER (9)**, **RING (11)** and **GLAND PACKING (10)**.

7. Take out **SEAT (3B)** and **GASKET (3C)** referencing structure diagram detail B.

※If there is a tight fit between the parts, leading to disassembly inconveniently. Please use tools of soft materials (non-metallic) to knock and separate parts preventing part from damage.

8. Complete disassembling.

JBF-KM-EXTENDED Disassembling Procedure

1. Turn the ball to closed position.

2. Loosen the BOLT (7) and take out CAP (6).

3. Take out **SEAT SUPPORT (4)**, **BODY GASKET (5)**, **SEAT (3B)** and **SEAT SPRING (3D)** referencing structure diagram detail A.

4. Take out **BALL (2B)**.

※If there is a tight fit between the parts, leading to disassembly inconveniently. Please use tools of soft materials (non-metallic) to knock and separate parts preventing part from damage.

5. Loosen the **BONNET BOLT (21)** and **GLAND BOLT (17)**, and then take out **GLAND (16)** and **GLAND BEARING (15)**.

6. Take out **BONNET (18)** together with **BONNET GASKET (20)** and **BONNET PACKING (19)**.

7. Draw the **STEM (8B)** out from the body together with **THRUST WASHER (9)**, **RING (11)** and **GLAND PACKING (10)**.

8. Take out **SEAT (3B)** and **GASKET (3C)** referencing structure diagram detail B.

   ※If there is a tight fit between the parts, leading to disassembly inconveniently. Please use tools of soft materials (non-metallic) to knock and separate parts preventing part from damage.

9. Complete disassembling.

JBF-KM Assemblage Procedure

1. **SEAT (3B)** and **GASKET (3C)**, referencing structure diagram detail B, are placed in **BODY (1)**.

2. Assemble **THRUST WASHER (9)**, **RING (11)** and GLAND PACKING (10) together with **STEM (8B)** first.

3. **STEM (8B)** assembling unit is placed in **BODY (1)**.

4. **BALL (2B)** is placed on **SEAT (3B)** stably. Take care of the mounting direction of ball gutter and stem.

5. **SEAT (3B)** and **SEAT SPRING (3D)**, referencing structure diagram detail A, are assembled into **SEAT SUPPORT (4)**.

6. **SEAT SUPPORT (4)**, **BODY GASKET (5)** and **CAP (6)** are assembled into **BODY (1)**.

7. Fasten **BOLT (7)** diagonally in order (Figure 1)

8. Assemble **GLAND (16)** and **GLAND BEARING (15)**.

9. Fasten **GLAND BOLT (17)**. Please refer to Tables 1 to 2.
10. Please identify smooth action of ball valve to complete assemblage procedure.

JBF-KM-EXTENDED Assemblage Procedure

1. **SEAT (3B)** and **GASKET (3C)**, referencing structure diagram detail B, are placed in **BODY (1)**.

2. Assemble **THRUST WASHER (9)**, **RING (11)** and **GLAND PACKING (10)** together with **STEM (8B)** first.

3. **STEM (8B)** assembling unit is placed in **BODY (1)**.

4. **BALL (2B)** is placed on **SEAT (3B)** stably. Take care of the mounting direction of ball gutter and stem.

5. **SEAT (3B)** and **SEAT SPRING (3D)**, referencing structure diagram detail A, are assembled into **SEAT SUPPORT (4)**.

6. **SEAT SUPPORT (4)**, **BODY GASKET (5)** and **CAP (6)** are assembled into **SEAT SUPPORT (4)**.

7. Fasten **BOLT (7)** diagonally in order (Figure 1)

8. Assemble **BONNET (18)**, **BONNET PACKING (19)**, **GLAND (16)** and **GLAND BEARING (15)**. Fasten **BONNET BOLT (21)**.

9. Fasten **GLAND BOLT (17)**. Please refer to Tables 1 to 2.

10. Please identify smooth action of ball valve to complete assemblage procedure.

JDV CONTROL VALVES CO., LTD.

Technology For The Professionals.

進典工業股份有限公司

JDV CONTROL VALVES CO.,LTD.

浮動式金屬密封保溫夾套球閥

安裝、操作和維護手冊

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JBF-KM

浮動式金屬密封保溫夾套球閥
安裝操作維修手冊

目錄

概述

JBF-KM 為進典公司-浮動式金屬密封保溫夾套球閥，主要設計用於流體有特定溫度區間下持溫/保溫的需求，搭配多樣的閥座材質使用，可應用於廣泛的工況環境。

產品特點包含:

1. **閥體一片式設計：**避免多片式接合面的洩漏問題。
2. **全周保溫外殼設計：**可藉由通入保溫外殼的保溫介質，使得管路流體維持特定的需求溫度。
3. **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。
4. **防閥軸飛出裝置(2-1/2 吋以上)：**舊式中軸為由外部裝入閥體，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，新式防中軸飛出設計，為由閥體內部穿出，因受閥體阻擋所以不會飛出。
5. **金屬密封閥座：**閥座使用 INCONEL X-750 彈片，可使閥座達到自緊密封。
6. **平衡式泄壓孔：**球頂端採用洩壓孔設計，平衡閥體內腔壓力，延長球墊壽命。
7. **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	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

	**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。 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。

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

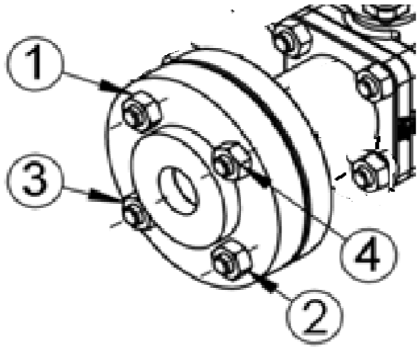
1. 處理已拆裝球閥，確保產品做適當保護,以避免產品之損壞。
2. 當處理大尺寸閥門時，應把產品安全穩固的固定好，使用適當的工具（托架、掛鉤、緊固物、繩索）搬運，移動時要保持平衡以避免搬運的過程中掉落或

晃動，造成產品損壞。

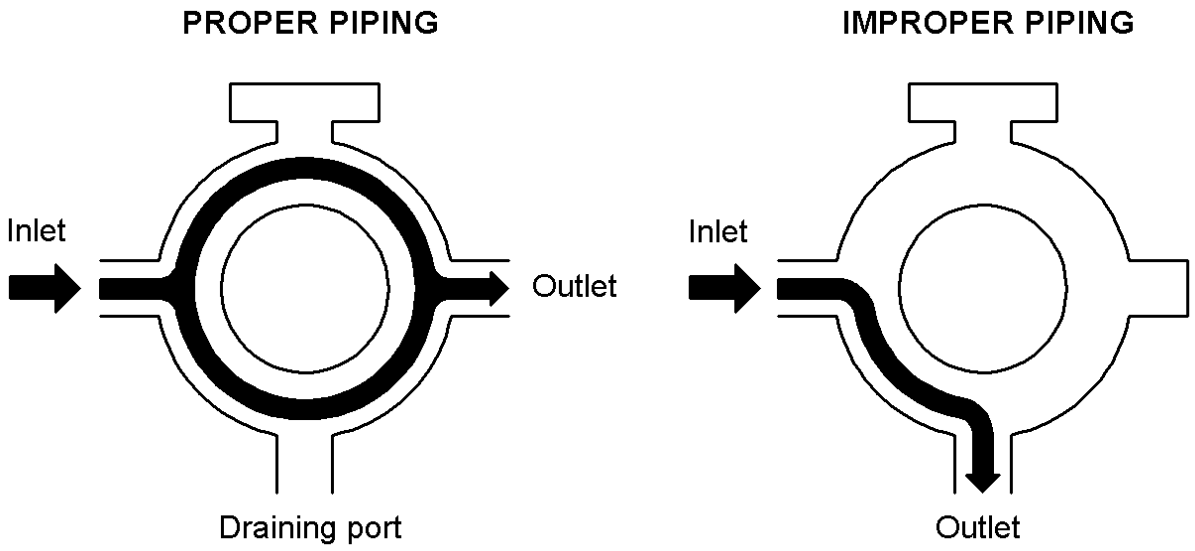
3. 安裝準備須知

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，將法蘭口的密封件移除，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。
6. 安裝閥門，請使用板手並遵循對角順序(圖一)鎖附螺絲，以避免法蘭變形。
7. 安裝閥門前，請確認閥門兩端的法蘭尺寸和流道的公稱尺寸。
8. 安裝閥門時，請確認保溫介質的出入口、排放口無異物存在。適當的保溫介質流通方式可使保溫效果更有效率(圖二)



圖一 (Figure 1)



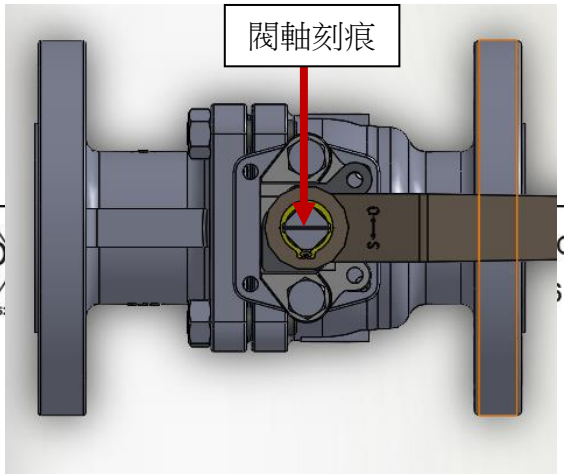
圖二 (Figure 2)

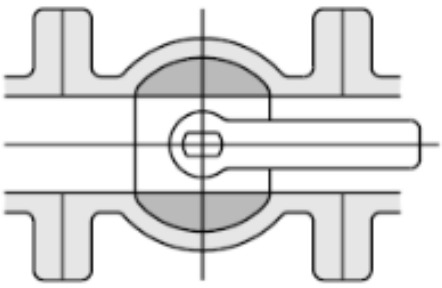
操作前須知

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。
1.
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。
2.

※ 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(圖三)

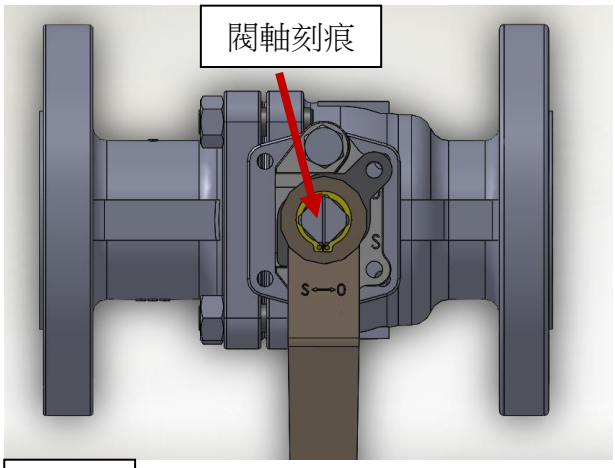


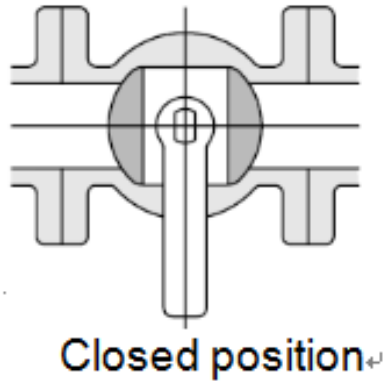


Open position

(圖三)

※ 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(圖四)



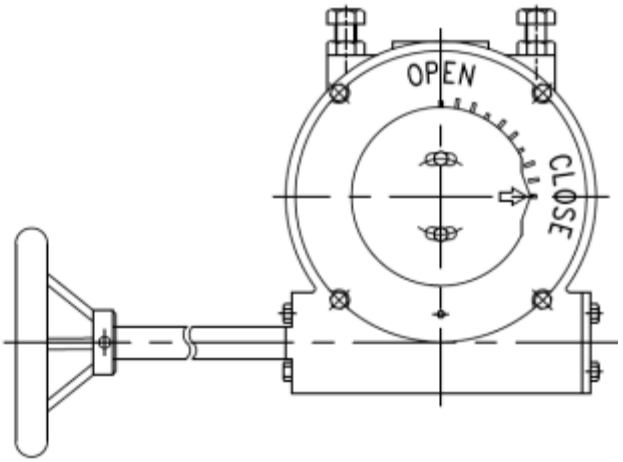


(圖四)

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

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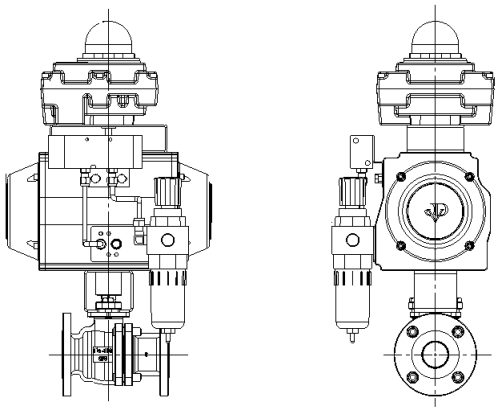


日常維護與問題排除

※ 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(閥軸)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/ANSI 150LB /PN16

閥門尺寸	壓蓋螺絲	扭力 單位:N.m
1/2”	M8	8
3/4”	M8	8
1”	M8	10
1-1/2”	M10	15
2”	M10	15
2-1/2”	M10	18
3”	M10	22
4”	M12	22
6”	M12	25

(表一)

JIS 20K/ANSI 300LB /PN40

閥門尺寸	壓蓋螺絲	扭力 單位:N.m
1/2”	M8	8
3/4”	M8	8
1”	M8	10
1-1/2”	M10	15
2”	M10	15
2-1/2”	M10	18
3”	M10	22
4”	M12	22
6”	M12	25

(表二)

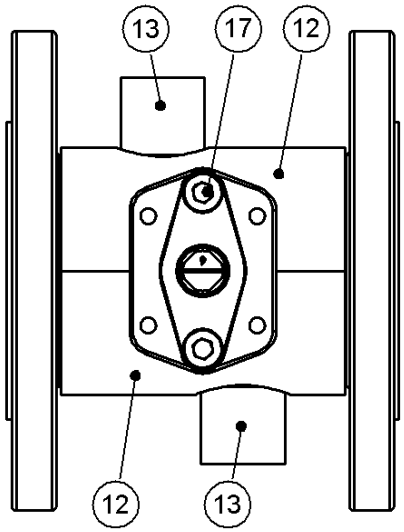
故障排除

區域	問題描述	解決方案
內漏	球面洩漏發生	1.確認球面(2B)及閥座面(3B)是否有損傷或刮痕 2.如無損傷，請更換球墊座墊片(3C)。 如球(2B)或閥座(3B)受損，更換受損球(2B)或閥座(3B)。 3.每次拆卸時，有必要更換閥座密封墊片(5)。
外漏	心軸中口發生洩漏	1.鎖緊壓蓋螺絲(17)請參各規格扭力參照(表一~二) 2.如無法止漏，請更換閥軸填料(10)。

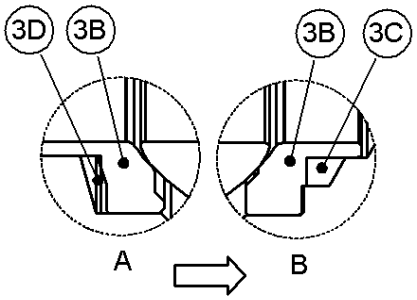
註:請參照結構圖零件編號說明

JBF-KM 結構圖

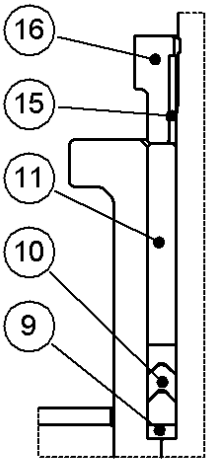
流道口尺寸: DN15 to DN200 (1/2”~8”)
法蘭尺寸: DN40 to DN300 (1-1/2”~12”)



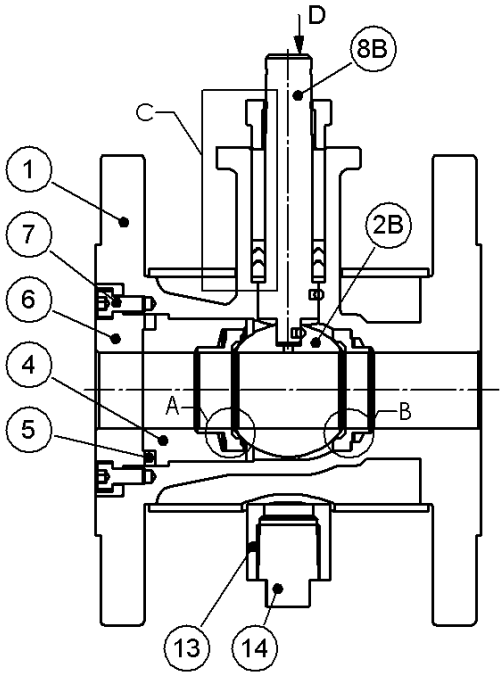
VIEW D



Uni-directional



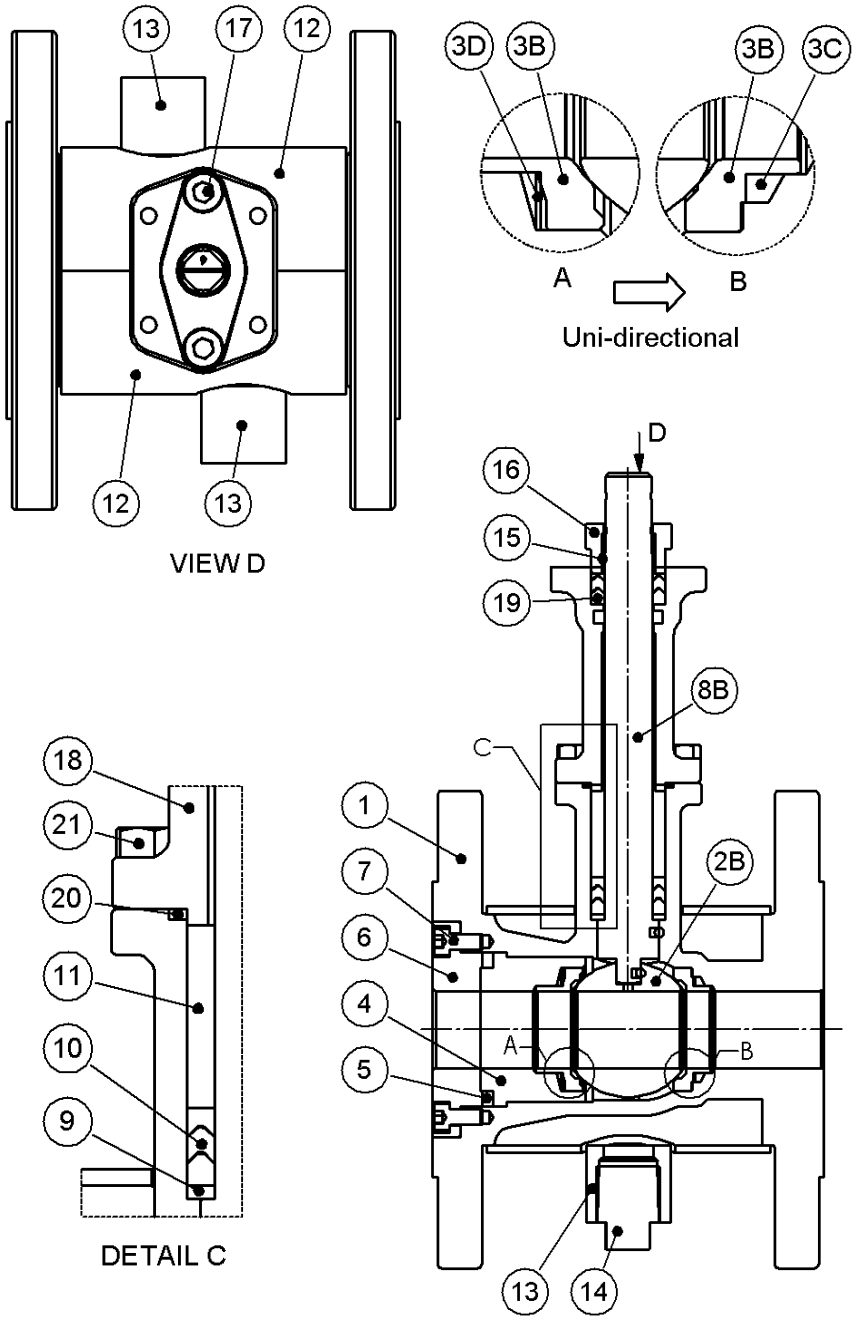
DETAIL C



NO	PART NAME
1	BODY
2B	BALL
3B	SEAT
3C	GASKET
3D	SEAT SPRING
4	SEAT SUPPORT
5	BODY GASKET
6	CAP
7	BOLT
8B	STEM
9	THRUST WASHER
10	GLAND PACKING
11	RING
12	JACKETED
13	COUPLING
14	PLUG
15	GLAND BEARING
16	GLAND
17	GLAND BOLT

JBF-KM-EXTENED 結構圖

Bore size: DN15 to DN200 (1/2”~8”)
Flange size: DN40 to DN300 (1-1/2”~12”)



NO	PART NAME
1	BODY
2B	BALL
3B	SEAT
3C	GASKET
3D	SEAT SPRING
4	SEAT SUPPORT
5	BODY GASKET
6	CAP
7	BOLT
8B	STEM
9	THRUST WASHER
10	GLAND PACKING
11	RING
12	JACKETED
13	COUPLING
14	PLUG
15	GLAND BEARING
16	GLAND
17	GLAND BOLT
18	BONNET
19	BONNET PACKING
20	BONNET GASKET
21	BONNET BOLT

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-KM 拆裝程序

1. 旋轉球至關的位置。

1. 鬆開 BOLT(7)，取出 CAP(6) 。

2. 取下 SEAT SUPPORT(4)、BODY GASKET(5)、A 圖的 SEAT(3B)和 SEAT SPRING(3D) 。

3. 取下 BALL(2B) 。
4. ※如果因為零件之間配合相對緊密，導致有不方便取下的情形發生時，可用軟性材質(非金屬)工具輕敲零件使其鬆開，避免造成零件損傷。

5. 鬆開 GLAND BOLT(17)，取下 GLAND(16)、GLAND BEARING(15) 。

6. 將 STEM(8B)從內往外，往閥門上方連同 THRUST WASHER(9)、RING(11)和 GLAND PACKING(10)一起取出。
7. 取下 B 圖的 SEAT(3B)、GASKET(3C) 。

8. ※如果因為零件之間配合相對緊密，導致有不方便取下的情形發生時，可用軟性材質(非金屬)工具輕敲零件使其鬆開，避免造成零件損傷。

9. 拆卸完成。

JBF-KM-EXTENDED 拆裝程序

1. 旋轉球至關的位置。

2. 鬆開 BOLT(7)，取下 CAP(6) 。

3. 取下 SEAT SUPPORT(4)、BODY GASKET(5)、A 圖的 SEAT(3B)和 SEAT SPRING(3D) 。

4. 取下 BALL(2B) 。

5. ※如果因為零件之間配合相對緊密，導致有不方便取下的情形發生時，可用軟性材質(非金屬)工具輕敲零件使其鬆開，避免造成零件損傷。

6. 鬆開 BONNET BOLT(21)、GLAND BOLT(17)，取下 GLAND(16)和 GLAND BEARING(15) 。

7. 將 BONNET(18)、BONNET GASKET(20)和 BONNET PACKING (19)一起取出。

8. 將 STEM(8B)從內往外，往閥門上方連同 THRUST WASHER (9)、RING(11)和 GLAND PACKING (10)一起取出。

9. 取下 B 圖的 SEAT(3B)、GASKET(3C) 。

10. ※如果因為零件之間配合相對緊密，導致有不方便取下的情形發生時，可用軟性材質(非金屬)工具輕敲零件使其鬆開，避免造成零件損傷。

11. 拆卸完成。

JBF-KM 組裝程序

1. 將 B 圖的 SEAT(3B)和 GASKET(3C)放入 BODY(1)中。

2. 將 THRUST WASHER(9)、RING(11)和 GLAND PACKING (10)先行和 STEM(8B)組裝。

3. 將 STEM(8B)組合件組裝到 BODY(1)中。

4. 組裝 BALL(2B)到 SEAT(3B)上，注意球溝與閥軸裝配方向。

5. 將 A 圖的 SEAT(3B)和 SEAT SPRING(3D)組裝到 SEAT SUPPORT(4)上。

6. 將 SEAT SUPPORT(4) 、BODY GASKET(5)、CAP(6)組裝到 BODY(1)中。

7. 依序鎖緊 BOLT(7) (圖一)。

8. 組裝 GLAND(16)和 GLAND BEARING(15) 。

9. 鎖緊 GLAND BOLT(17)，請參照(表一~二) 。
   請確認球閥作動是否順暢，即完成組裝程序。

JBF-KM-EXTENDED 組裝程序

1. 將 B 圖的 SEAT(3B)和 GASKET(3C)放入 BODY(1)中。

2. 將 THRUST WASHER (9)、RING(11)和 GLAND PACKING (10)先行和 STEM(8B)組裝。

3. 將 STEM(8B)組合件組裝到 BODY(1)中。

4. 組裝 BALL(2B)到 SEAT(3B)上，注意球溝與閥軸裝配方向。

5. 將 A 圖的 SEAT(3B)、和 SEAT SPRING(3D)組裝到 SEAT SUPPORT(4)上。

6. 將 SEAT SUPPORT(4) 、BODY GASKET(5)、CAP(6)組裝到 BODY(1)中。

7. 依序鎖緊 BOLT(7) (圖一)。

8. 組裝 BONNET(18)、BONNET PACKING (19)、GLAND(16)和 GLAND BEARING(15)，鎖緊 BONNET BOLT(21) 。

9. 鎖緊 GLAND BOLT(17)，請參照(表一~二) 。
   Fasten **GLAND BOLT (17)**. Please refer to Tables 1 to 2.

10. 請確認球閥作動是否順暢，即完成組裝程序。