

Jamesbury 3-way flanged ball valves

Series AM and DM

Series DM150FD model D

6", 8" & 10" (DN150, 200 & 250)

series DM150FB model D

6" & 8" (DN150 & 200)

Class 150

Installation, maintenance and
operating instructions

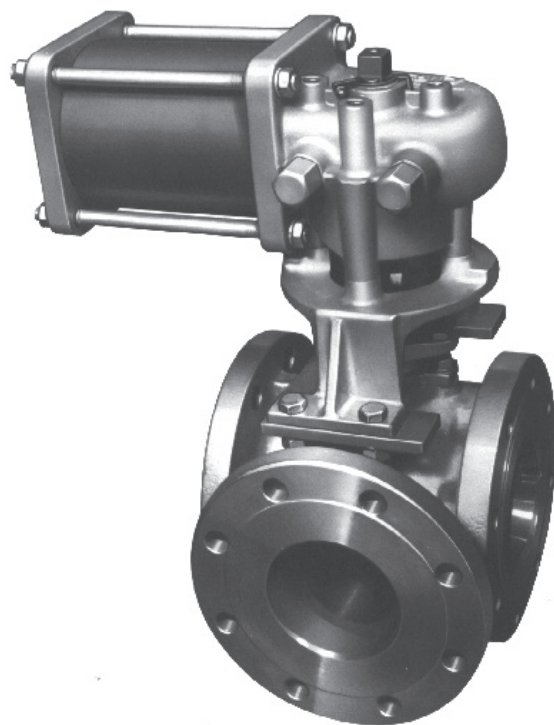


Table of contents

GENERAL	3
Scope of the Manual	3
Valve Markings	3
Safety Precautions	3
TRANSPORTATION AND STORAGE	4
INSTALLATION	4
General	4
Installing in the pipeline	4
Valve Insulation	4
Actuator	4
Commissioning	4
MAINTENANCE	5
General	5
Actuated Valve	5
Manual Valve	6
Disassembly	6
Checking Parts	6
Assembly	6
Testing the Valve	7
ACTUATOR MOUNTING	8
Open/Close Position Adjustment	8
SERVICE / SPARE PART	8

READ THESE INSTRUCTIONS FIRST!

These instructions provide information about safe handling and operation of the valve.

If you require additional assistance, please contact the manufacturer or manufacturer's representative.

SAVE THESE INSTRUCTIONS!

Addresses and phone numbers are printed on the back cover.

1. GENERAL

1.1 SCOPE OF THE MANUAL

This instruction manual contains important information regarding the installation, operation and maintenance of the Jamesbury™ 6", 8" & 10" (DN 150, 200 & 250) DM150FD and 6" & 8" (DN 150 & 200) DM150FB 3-Way Flanged Ball Valves. Please read these instructions carefully and save them for future reference.

WARNING

AS THE USE OF THE VALVE IS APPLICATION SPECIFIC, A NUMBER OF FACTORS SHOULD BE TAKEN INTO ACCOUNT WHEN SELECTING A VALVE FOR A GIVEN APPLICATION. THEREFORE, SOME OF THE SITUATIONS IN WHICH THE VALVES ARE USED ARE OUTSIDE THE SCOPE OF THIS MANUAL. IF YOU HAVE ANY QUESTIONS CONCERNING THE USE, APPLICATION OR COMPATIBILITY OF THE VALVE WITH THE INTENDED SERVICE, CONTACT VALMET FOR MORE INFORMATION.

1.2 VALVE MARKINGS

The valve has an identification plate attached to the bonnet stud (see **Figure 1**).

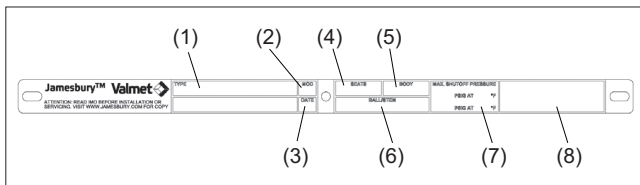


Figure 1. Identification plate

Identification plate markings:

1. Valve catalog code
2. Model
3. Assembly date
4. Seat Material
5. Body Material
6. Ball/Stem material
7. Maximum/minimum shut-off pressure/temperature
8. Approvals/Special Service marking

1.3 SAFETY PRECAUTIONS

WARNING

DO NOT EXCEED THE VALVE PERFORMANCE LIMITATIONS!

EXCEEDING THE PRESSURE OR TEMPERATURE LIMITATIONS MARKED ON THE VALVE IDENTIFICATION PLATE MAY CAUSE DAMAGE AND LEAD TO UNCONTROLLED PRESSURE RELEASE. DAMAGE OR PERSONAL INJURY MAY RESULT.

WARNING

SEAT AND BODY RATINGS!

THE PRACTICAL AND SAFE USE OF THIS PRODUCT IS DETERMINED BY BOTH THE SEAT AND BODY RATINGS. READ THE IDENTIFICATION PLATE AND CHECK BOTH RATINGS. THIS PRODUCT IS AVAILABLE WITH A VARIETY OF SEAT MATERIALS. SOME OF THE SEAT MATERIALS HAVE PRESSURE RATINGS THAT ARE LESS THAN THE BODY RATINGS. ALL OF THE BODY AND SEAT RATINGS ARE DEPENDENT ON VALVE TYPE AND SIZE, SEAT MATERIAL, AND TEMPERATURE. DO NOT EXCEED THESE RATINGS!

WARNING

BEWARE OF BALL MOVEMENT!

KEEP HANDS, OTHER PARTS OF THE BODY, TOOLS AND OTHER OBJECTS OUT OF THE OPEN FLOW PORT. LEAVE NO FOREIGN OBJECTS INSIDE THE PIPELINE. WHEN THE VALVE IS ACTUATED, THE BALL FUNCTIONS AS A CUTTING DEVICE. DISCONNECT ANY PNEUMATIC SUPPLY LINES, ANY ELECTRICAL POWER SOURCES AND MAKE SURE SPRINGS IN SPRING-RETURN ACTUATORS ARE IN THE FULL EXTENDED/RELAXED STATE BEFORE PERFORMING ANY VALVE MAINTENANCE. FAILURE TO DO THIS MAY RESULT IN DAMAGE OR PERSONAL INJURY!

WARNING:

WHEN HANDLING THE VALVE OR VALVE/ACTUATOR ASSEMBLY, TAKE ITS WEIGHT INTO ACCOUNT!

REFERENCE THE APPLICABLE TECHNICAL BULLETIN FOR VALVE WEIGHTS. NEVER LIFT THE VALVE OR VALVE/ACTUATOR ASSEMBLY BY THE ACTUATOR, POSITIONER, LIMIT SWITCH OR THEIR PIPING. PLACE LIFTING DEVICES SECURELY AROUND THE VALVE BODY. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DAMAGE OR PERSONAL INJURY FROM FALLING. PARTS (SEE FIGURE 2).

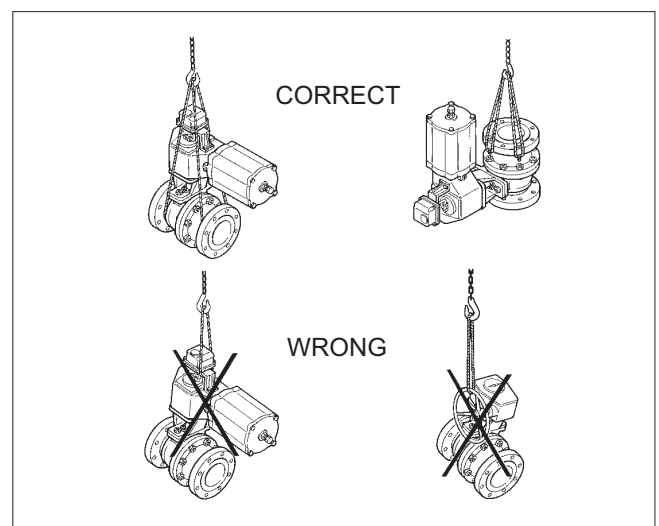


Figure 2. Lifting the valve

2. TRANSPORTATION AND STORAGE

Check the valve and the accompanying devices for any damage that may have occurred during transport.

Store the valve carefully. Storage indoors in a dry place is recommended.

Do not remove the flow port protectors until installing the valve.

Move the valve to its intended location just before installation.

The valve is usually delivered in the open position.

If the valve(s) are to be stored for a long duration, follow the recommendations of IMO-S1.

3. INSTALLATION

3.1 GENERAL

Remove the flow port protectors and check that the valve is clean inside. Clean valve if necessary.

Flush the pipeline carefully before installing the valve. Foreign objects, such as sand or pieces of welding electrodes, will damage the ball and seats.

3.2 INSTALLING IN THE PIPELINE

WARNING

THE VALVE SHOULD BE TIGHTENED BETWEEN FLANGES USING APPROPRIATE GASKETS AND FASTENERS COMPATIBLE WITH THE APPLICATION, AND IN COMPLIANCE WITH APPLICABLE PIPING CODES AND STANDARDS. CENTER THE FLANGE GASKETS CAREFULLY WHEN FITTING THE VALVE BETWEEN FLANGES. DO NOT ATTEMPT TO CORRECT PIPELINE MISALIGNMENT BY MEANS OF FLANGE BOLTING!

The valve may be installed in any position and offers tightness in both directions. It is recommended, however, that the valve be installed with the insert facing upstream. It is not recommended to install the valve with the stem on the underneath side because dirt in the pipeline may then enter the body cavity and potentially damage the stem packing (see **Figure 3**).

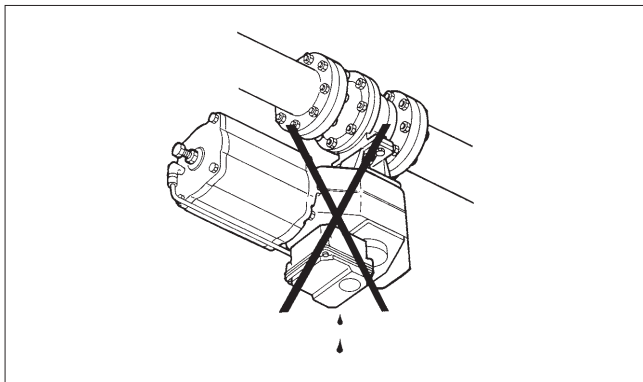


Figure 3. Avoid this mounting position

Refer to the **Section 4, MAINTENANCE** for stem seal adjustment. If there is weepage past the stem seals upon installation, it means the valve may have been subject to wide temperature variations in shipment. Leak-tight performance will be restored by a simple stem seal adjustment described in the **MAINTENANCE** section.

3.3 VALVE INSULATION

If necessary, the valve may be insulated. Insulation must not continue above the upper level of the valve (see **Figure 4**).

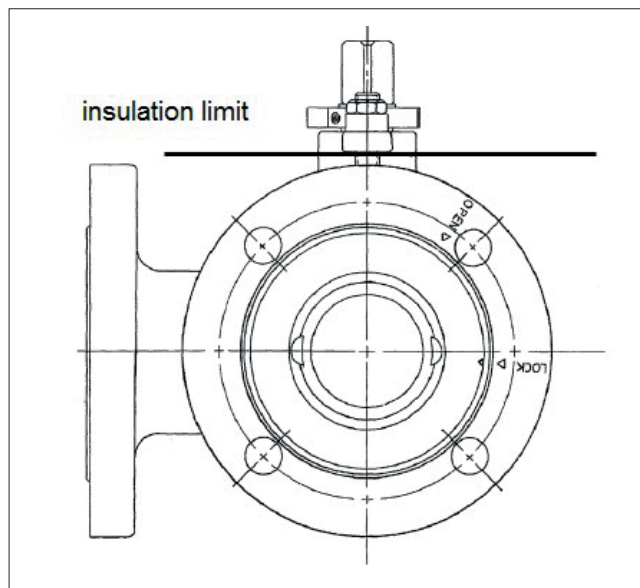


Figure 4. Insulation of the valve

3.4 ACTUATOR

WARNING

WHEN INSTALLING THE ACTUATOR ON THE VALVE, MAKE SURE THAT THE VALVE ASSEMBLY FUNCTIONS PROPERLY. INFORMATION ON ACTUATOR INSTALLATION IS GIVEN IN **SECTION 5** OR IN THE SEPARATE ACTUATOR INSTRUCTIONS.

The actuator should be installed in a manner that allows plenty of room for its removal.

The upright position is recommended for the actuator.

The actuator must not touch the pipeline, because pipeline vibration may interfere with its operation.

In certain cases, it may be considered advantageous to provide additional support to the actuator. These cases will normally be associated with large actuators, extended stems, or where severe vibration is present. Please contact Valmet for advice.

3.5 COMMISSIONING

Ensure that there is no dirt or foreign objects left inside the valve or pipeline. Flush the pipeline carefully. Make sure that the valve is fully open when flushing.

Ensure that all nuts, fittings, and cables are properly fastened.

If so equipped, check that the actuator positioner and/or switch are correctly adjusted. To adjust any accompanying device(s) refer to the separate control equipment instruction manuals.

4. MAINTENANCE

4.1 GENERAL

Although *Jamesbury* valves are designed to work under severe conditions, proper preventative maintenance can significantly help to prevent unplanned downtime and in real terms reduce the total cost of ownership. Valmet recommends inspecting valves at least every five (5) years. The inspection and maintenance frequency depends on the actual application and process condition. Routine maintenance consists of tightening the bonnet screws (11) or bonnet nuts (10) per **Section 4.6**. If weeping still occurs, tighten another ½ turn.

WARNING

THE VALVE STEM (4) IS SEALED BY THE STEM SEALS. LOOSENING OR REMOVING BONNETS NUTS (10), OR BONNET SCREW (11) WILL RELEASE PIPELINE PRESSURE TO THE ATMOSPHERE. FAILURE TO COMPLETELY REMOVE ANY PIPELINE PRESSURE PRIOR TO LOOSENING OR REMOVING BONNETS NUTS (10), OR BONNET SCREW (11) COULD RESULT IN EJECTION OF STEM (4) FROM THE VALVE, DAMAGE AND/OR PERSONAL INJURY.

Overhaul maintenance consists of replacing seats and seals. A standard repair kit consisting of these parts may be obtained through your authorized Valmet Distributor.

NOTE: Repair kits contain two seats (5), two O-rings (31), one body seal (6), two stem seals (7) and one stem bearing (8). The two stem seals (7) are white in color; one upper and one lower.

Refer to the Repair Kit chart (see **Table 1**).

WARNING

AS THE USE OF THE VALVE IS APPLICATION SPECIFIC, MANY FACTORS SHOULD BE CONSIDERED WHEN SELECTING A VALVE FOR A GIVEN APPLICATION. THEREFORE, SOME OF THE SITUATIONS IN WHICH THE VALVES ARE USED ARE OUTSIDE THE SCOPE OF THIS MANUAL.

IF YOU HAVE ANY QUESTIONS CONCERNING THE USE, APPLICATION OR COMPATIBILITY OF THE VALVE WITH THE INTENDED SERVICE, CONTACT VALMET FOR MORE INFORMATION.

TABLE 1			
Repair Kits			
Valve Description	PTFE Kit	MTFE Kit	* Double Block & Bleed MTFE
6" (DN 150) DM150FD & FB	RKA-77TT	RKA-77MT	RKD-5MT*
8" (DN 200) DM150FD & FB	RKA-78TT	RKA-78MT	RKD-6MT*
10" (DN 250) DM150FD	RKA-79TT	RKA-79MT	RKD-7MT*
* For Buna-N O-Ring add '52' to the Repair Kit Number. Add '53' for VITON®.			

WARNING

FOR YOUR SAFETY, IT IS IMPORTANT THE FOLLOWING PRECAUTIONS BE TAKEN PRIOR TO REMOVAL OF THE VALVE FROM THE PIPELINE OR BEFORE ANY DISASSEMBLY:

1. WEAR ANY PROTECTIVE CLOTHING OR EQUIPMENT NORMALLY REQUIRED WHEN WORKING WITH THE FLUID INVOLVED.
2. DEPRESSURIZE THE PIPELINE AND CYCLE THE VALVE AS FOLLOWS:
 - A. PLACE THE VALVE IN THE OPEN POSITION AND DRAIN THE PIPELINE.
 - B. CYCLE THE VALVE TO RELIEVE RESIDUAL PRESSURE IN THE BODY CAVITY BEFORE REMOVAL FROM THE PIPELINE.
 - C. AFTER REMOVAL AND BEFORE ANY DISASSEMBLY, CYCLE THE VALVE AGAIN SEVERAL TIMES.

4.2 ACTUATED VALVE

It is generally most convenient to detach the actuator and its auxiliary devices before removing the valve from the pipeline. If the valve package is small or if it is difficult to access, it may be more practical to remove the entire assembly.

NOTE: To ensure proper reassembly, observe the position of the actuator and positioner/limit switch with respect to the valve before detaching the actuator.

WARNING

ALWAYS DISCONNECT THE ACTUATOR FROM ITS POWER SOURCE, PNEUMATIC, HYDRAULIC OR ELECTRICAL, BEFORE ATTEMPTING TO REMOVE IT FROM THE VALVE!

WARNING

DO NOT REMOVE A SPRING-RETURN ACTUATOR UNLESS A STOP-SCREW IS CARRYING THE SPRING FORCE!

1. Detach the air supply, electrical supply, hydraulic supply and control signal cables or pipes from their connectors.
2. Unscrew the actuator mounting bracket screws.
3. If the valve assembly has a split no-play (clamped) coupling, loosen the coupling screws.
4. Lift the actuator straight up in line with the valve stem until the coupling between actuator drive and valve stem is completely disengaged.
5. Place actuator in a safe location to avoid damage or personal injury.

4.3 MANUAL VALVE

1. Remove the stem screw (24), the washer (25), loosen the adapter set screw (23) and then remove the "T" handle adapter (22) and handle (15). The handle (15) can be removed from the "T" handle adapter (22) by loosening the second set screw (23). This is not necessary. Lift the handle (22) straight up in line with the valve stem until it is completely disengaged.
2. Place all disassembled handle parts in small basket or bag to prevent damage or loss.

4.4 DISASSEMBLY

The *Jamesbury* breechlock insert is designed to minimize valve disassembly and assembly time. Disassembly requires a compressive load to seat the insert and a 60° rotation to unlock it. Slots are machined into the insert to provide engagement for rotation.

1. Read all **WARNINGS** before performing any work.
2. Be sure to cycle the valve.
3. If not done previously, remove the handle per **Section 4.3**.
4. Note the arrows on the indicator stop (12) pointing to the letters stamped on the bonnet face, (AC) & (AB). Note also that all three body flanges have been stamped "A", "B" or "C". The insert flange should be stamped "A", the non-insert flange "B" and the third flange "C". This will be important when assembly is performed. Remove the set screw (21) and lift off the indicator stop (12). It may be necessary to turn the stem slightly to take the pressure off the indicator stop against the stop slot.

DM150FD & DM150FB-2TR (Figure 10 & Figure 12)

5. On 6" & 8" (DN 150 & 200) valves, remove the bonnet nuts (10), the lockwashers (19), and the bonnet plate (9). On 10" (DN 250) valves, remove the socket head cap screws (11), then remove the bonnet plate (9) and the stem bearing (8).
6. **NOTE:** The groove on the face of the stem (4). The DM150FD has an "L" shape that indicates the location of the ball ports and the DM150FB-2TR has a groove that runs from the outside to the hole in the middle of the stem and another groove perpendicular to the first, that runs across the entire stem. This also indicates the ball port position. This will be important when assembly is performed. Remove the stem (4) and the stem seals (7), being careful not to scratch any sealing surfaces. Proceed to Step 8.

DM150FB & DM150FB-3TR (Figure 11 & Figure 13)

7. Remove bonnet screw (11) and flat head screw (60). Lift off bonnet plate (9) and latch mechanism (40), (50), (58) and (60). Remove the stem (4) and the stem seals (7) being careful not to scratch any sealing surfaces.
8. Insert removal: Place the body on a bench with the insert flange facing up. Observe the marks next to the stamped words "OPEN" and "LOCK" on the insert flange face. Also, observe the notch on the insert outside diameter aligned with the mark next to the word "lock", (See **Figure 9**). Disassembly requires a compressive load to unseat the insert and a 60° counter-clockwise rotation to unlock it. To accomplish this, two slots in the insert are provided.
9. Rotate the insert with a counter-clockwise turning motion until the notch on the insert is aligned with the "open" mark on the valve flange, (See **Figure 10**).

NOTE: Failure to properly align the notch before insert removal may result in damage to the breechlock.

10. Pull out the insert (2). If the insert does not come out easily, close the ball and with a piece of wood or some other soft material, gently tap the ball from the end opposite the insert. This should free the insert.

NOTE: 3-Way balls have an unbalanced weight distribution. Always be careful when handling the ball to prevent damage to it or the seats.

11. Lift out the body seal (6), the seat (5) (and O-ring (31) if double block and bleed), and the ball (3).
12. Carefully remove the bottom seat (5) (and O-ring (31) if double block and bleed), out of the body. Do not scratch sealing surfaces in the body.

4.5 CHECKING PARTS

1. Clean all disassembled parts.
2. Check the stem (4) and ball (3) for damage. Pay particular attention to the sealing areas.
3. Check all sealing and gasket surfaces of the body (1) and insert (2).
4. Replace any damaged parts, including any fastener that has been stretched, corroded or heated.
5. Carefully check the insert locking tabs on the insert (2) and the locking groove on the body (1). **NOTE:** If any damage is detected, it is recommended that the valve be directed to a Valmet Service Center for maintenance.

NOTE: When ordering spare parts, always include the following information:

- a. Valve catalog code from Identification plate,
- b. If the valve is serialized – the serial number (stamped on the valve body),
- c. From **Figure 5, 6, 7 or 8**; the ballooned part number, part name and quantity required.

4.6 ASSEMBLY

WARNING:

INCORRECTLY ALIGNED INSERTS MAY CAUSE INJURY OR DAMAGE. ENSURE NOTCH IN INSERT IS OPPOSITE THE "LOCK". LOCATING POSITION ON THE BODY.

It is advisable to replace seats and seals if complete disassembly and reassembly become necessary. Refer to the Repair Kit chart (see **Table 1**). A good lubricant, compatible with the flow media, **MUST** be applied lightly to the seats, seals, ball and stem to facilitate assembly and ease on initial operation of the valve.

Clean all valve components if not done previously.

Re-inspect all components for damage before reassembling the valve. Look for damage to the seating areas, stem, body and insert; and look for wear in the bearing areas. Replace any damaged parts.

Carefully clean and polish the ball (3) sealing surface: It should be free of all scratches and grooves.

If the ball is slightly damaged, it may be possible to smooth the sealing surface with crocus cloth or equivalent. If deep scratches are present, replace the ball.

1. Slide the valve seat (5) sidewise into the body (1) to below the bonnet opening, and tilt it into place so that the proper surface (see **Figure 5**) will be adjacent to the ball (3), being careful not to cut the seat on the corners of the body. If double block and bleed seats are used, lubricate O-ring (31) and place ring in seat before assembling in body. This will keep O-ring in place during assembly.
2. **Ball Assembly – DM150FD (See Figure 10)**
Place the ball (3) into the valve with one port facing the insert end (port “A”) and the second port facing to the left (port “C”) and the ball slot facing the bonnet opening (see **Figure 1**). Be sure to prevent the ball from turning due to its unbalanced weight. Insert the stem (4) as a temporary means of holding the ball, with the stem “L” shaped groove pointing to the “A” and “C” ports. Turn the ball 90° clockwise. This provides a closed ball face for inserting the insert seat. Proceed to Step 4.
- Ball Assembly – DM150FB (See Figure 11)**
Place the ball (3) into the valve with one port facing out (port “A”) and the second port facing down (port “C”) and the ball slot facing the bonnet opening. Be sure to prevent the ball from turning due to its unbalanced weight. Insert the stem (4) with the stem arrow pointing to port “A” as a temporary means of holding the ball, and turn the ball 90° clockwise. This provides a closed ball face for inserting the insert seat. Proceed to Step 4.
- Ball Assembly – DM150FB-2TR & 3TR (See Fig. 12&13)**
Place the ball (3) into the valve with one port facing out (port “A”) and the second port facing down (port “C”) and the ball slot facing the bonnet opening. The cross slot will be perpendicular to the “A” & “B” ports. Insert the stem (4) with the stem short arrow pointing to port “A” and the cross arrow perpendicular to the “A” & “B” ports as a temporary means of holding the ball, and turn the ball 90° clockwise. This provides a closed ball face for inserting the insert seat. Proceed to Step 4.
3. Insert the second seat (5) with the proper surface facing the ball. If double block and bleed seats are used, assemble same way as body seat in Step 2 above. Insert the body seal (6) with the chamfer of the seal away from the ball.
4. Wipe a liberal amount of lubricant on the body seal and locking grooves and tabs of the body and insert (2).
5. Place the insert into the body, and align the notch on the insert with the ‘OPEN’ mark on the valve body so that the breechlock tabs engage without interference, (See **Figure 10**). This alignment should be checked and the proper OPEN position permanently marked on the flange before further assembly takes place. Use caution to ensure that the body seal is not dislodged from its shoulder.
6. Press down on the insert to unseat it and then rotate the insert with a clockwise turning motion until the notch on the insert is aligned with the ‘LOCK’ mark on the valve flange, (See **Figure 9**).
7. Insert the stem (4) and insert the stem seal (7) into the body with the chamfer on the I.D. facing down. The stem should be tapped into place gently to avoid cutting the seal. The slotted top of the stem will give a visual indication of valve position. DM150FD “L” shaped slot in stem should be pointing to the “B” and “C” flanges. The DM150FB groove should be facing the “C” flange. The DM150FB-2TR and 3TR short groove should be pointing to the “C” flange and the cross groove should be pointing to the “A” and “B” flanges.
8. 6” & 8” (DN 150 & 200) valves, place the other stem seal (7) (with I.D. chamfer down) over the stem and push it down onto the stem shoulder.
9. **6” & 8” (DN 150 & 200) DM150FD & FB-2TR valves.**
Fit the bonnet plate (9) over the stem (4) and press it down into the bonnet hole. Run the bonnet nuts (10) on the bonnet studs (11) until they engage the bonnet plate. Tighten the nuts evenly and alternately to 20 – 25 ft.·lbs. (27 – 34 N·m).
- 10” (DN 250) DM150FD valves.**
Place the stepped stem bearing (8) over the stem (larger diameter down) and push it down to the stem shoulder. Place the bonnet plate (9) over the stem and down onto the stem bearing with the slotted face of the plate facing up. Place a cap screw (11) into each bonnet plate hole and tighten evenly and alternately to 20 – 25 ft.·lbs. (27 – 34 N·m).
10. Place the indicator stop (12) over the stem (arrows on stop facing up) and push it down into the bonnet plate groove. Indicator stop arrows should be pointing to the “BC” stamped on the body face. Tighten the set screw (21) in the indicator stop (12). Proceed to Step 13.
- 6” & 8” (DN 150 & 200) DM150FB & DM150FB-3TR valves.**
11. Place bonnet plate (9) and latch mechanism (40), (50) & (58) on bonnet of body (see **Figures 2 & 4**). Thread flat head screw (60) in bonnet holes and tighten. Place a cap screw (11) into each bonnet plate hole and tighten evenly and alternately to 20 – 25 ft.·lbs. (27 – 34 N·m). Place indicator stop (12) over stem so that the arrow points toward the “shut” position stamped on the latch mechanism.
12. Place the “T” handle adapter (22) on the stem with the handle (15) pointing parallel with the “A” and “B” flanges. Tighten the set screws (23).
13. Place the stem screw (24) thru the washer (25) and thread the screw through the “T” handle adapter (22) and the handle (15).
14. Rotate the ball with a gentle back and forth motion to build gradually to the full quarter turn. By rotating slowly, the seat lips will flow into place to maintain a permanent seal against the ball. A premature quick turning motion may cut the seat before it has a chance to flow into its proper place.

4.7 TESTING THE VALVE

WARNING

WHEN PRESSURE TESTING, EXERCISE CAUTION AND MAKE SURE ALL EQUIPMENT USED IS IN GOOD WORKING CONDITION AND APPROPRIATE FOR THE INTENDED PRESSURE.

WARNING

FAILURE TO FULLY ROTATE THE INSERT UNTIL THE NOTCH AND LOCK MARK ARE ALIGNED COULD RESULT IN RELEASE OF VALVE PRESSURE CAUSING DAMAGE AND PERSONAL INJURY!

WARNING

BEFORE PERFORMING ANY PRESSURE TESTS CONFIRM THE INSERT (2) IS IN THE "LOCK" POSITION, (SEE **FIGURE 9**).

If the valve is to be tested prior to returning to service, make sure the test pressures are in accordance with an applicable standard.

When testing the valve for external tightness, keep the ball in the half open position.

If testing the valve seat tightness, please contact Valmet for advice.

WARNING

WHEN PERFORMING ANY TESTS, NEVER EXCEED THE MAXIMUM OPERATING PRESSURE OR MAXIMUM SHUT-OFF PRESSURE LISTED ON THE IDENTIFICATION PLATE!

5. ACTUATOR MOUNTING

IMPORTANT: When these valves are equipped with an actuator and the actuator is removed to service the valve, **PROPER ALIGNMENT OF THE ACTUATOR DRIVER AND VALVE STEM IS ESSENTIAL WHEN THE ACTUATOR IS REMOUNTED.** In the case of valves and actuators connected with a split no-play (clamped) coupling, tighten the coupling bolts before final tightening of the valve bracket bolts. In the case of valves and actuators with solid, loose-fit couplings, the actuator should be positioned on the valve without any side loading of the coupling in both the open and closed positions before final tightening of the valve bracket bolts.

WARNING

FOR YOUR SAFETY, IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS BE TAKEN!

BEFORE INSTALLING THE VALVE AND ACTUATOR, BE SURE THE INDICATOR POINTER ON TOP OF THE ACTUATOR IS CORRECTLY INDICATING THE VALVE'S POSITION. FAILURE TO ASSEMBLE THESE TO INDICATE THE CORRECT VALVE POSITION COULD RESULT IN DAMAGE OR PERSONAL INJURY!

WHEN INSTALLING A LINKAGE KIT OR SERVICING THE VALVE/ACTUATOR ASSEMBLY, THE BEST PRACTICE IS TO REMOVE THE ENTIRE ASSEMBLY FROM SERVICE!

AN ACTUATOR SHOULD BE REMOUNTED ON THE SAME VALVE FROM WHICH IT WAS REMOVED. THE ACTUATOR MUST BE ADJUSTED FOR THE PROPER "OPEN" AND "CLOSE" POSITIONS EACH TIME IT IS REMOVED!

THE LINKAGE KITS HAVE BEEN DESIGNED TO SUPPORT THE WEIGHT OF THE NELES ACTUATOR AND RECOMMENDED ACCESSORIES. USE OF THE LINKAGE TO SUPPORT ADDITIONAL EQUIPMENT OR ADDITIONAL WEIGHT SUCH AS PEOPLE, LADDERS, ETC., MAY RESULT IN THE FAILURE OF THE LINKAGE, VALVE, OR ACTUATOR; AND MAY CAUSE DAMAGE OR PERSONAL INJURY!

5.1 OPEN/CLOSE POSITION ADJUSTMENT

NOTE: Refer to the appropriate Installation, Maintenance, and Operating Instructions (IMO) for specific directions on how to adjust the actuator travel stops or limit switch (see **Table 2**).

6. SERVICE / SPARE PART

We recommend that valves be directed to our service centers for maintenance. The service centers are equipped to provide rapid turn-around at a reasonable cost and offer new valve warranty with all reconditioned valves.

NOTE: When sending goods to the service center for repair, do not disassemble them. Clean the valve carefully and flush the valve internals. Include the material safety datasheet(s) (MSDS) for all media flowing through the valve. Valves sent to the service center without MSDS datasheet(s) will not be accepted. Send the valves to the service center in the half open position.

For further information on spare parts and service or assistance visit our web-site at www.valmet.com/flowcontrol/valves.

NOTE: When ordering spare parts, always include the following information:

- Valve catalog code from identification plate,
- If the valve is serialized – the serial number (from identification plate)
- From **Figure 5, 6, 7 or 8**, the ballooned part number, part name and quantity required.

TABLE 2

Actuator Installation, Maintenance and Operating Instructions

Actuator	IMO
QPX	215
VPVL	553
B1C	6 BC 71
B1J	6 BJ 71
BCH	6 BCH 70
M	549
ADC	I4400, I4500 or I4600
ESR	I7016
I	I6500, I6600 or I6700
LCR	I1262
LCU	I1263
Q6	I1227 or I1383
QX	I3000
V	I2100, I2475, I2500, I2700 or I5500
Torq-Handle®	71

Contact your authorized Valmet distributor for copies of these instructions

6", 8" & 10" (DN 150, 200 & 250) DM150FD

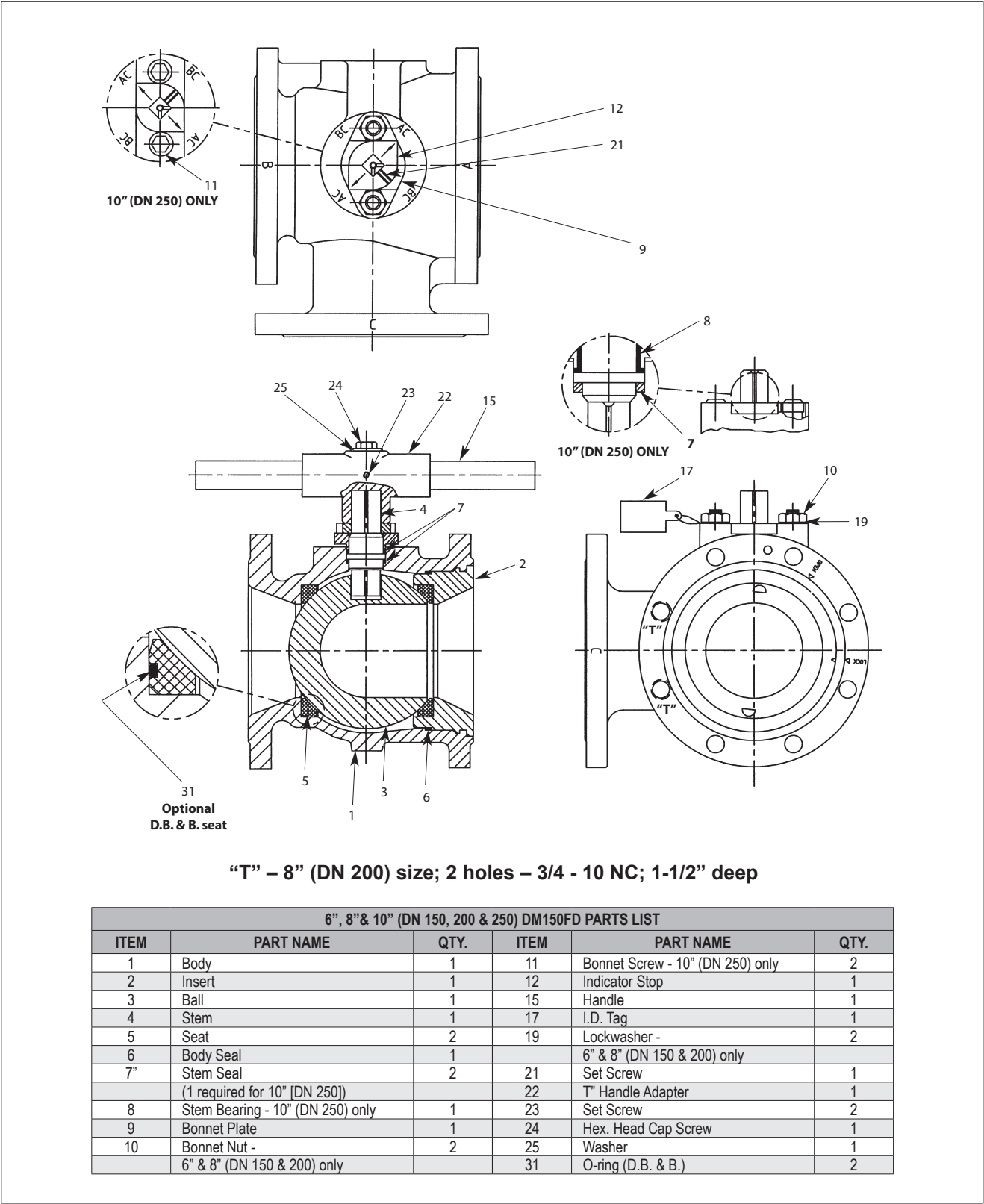
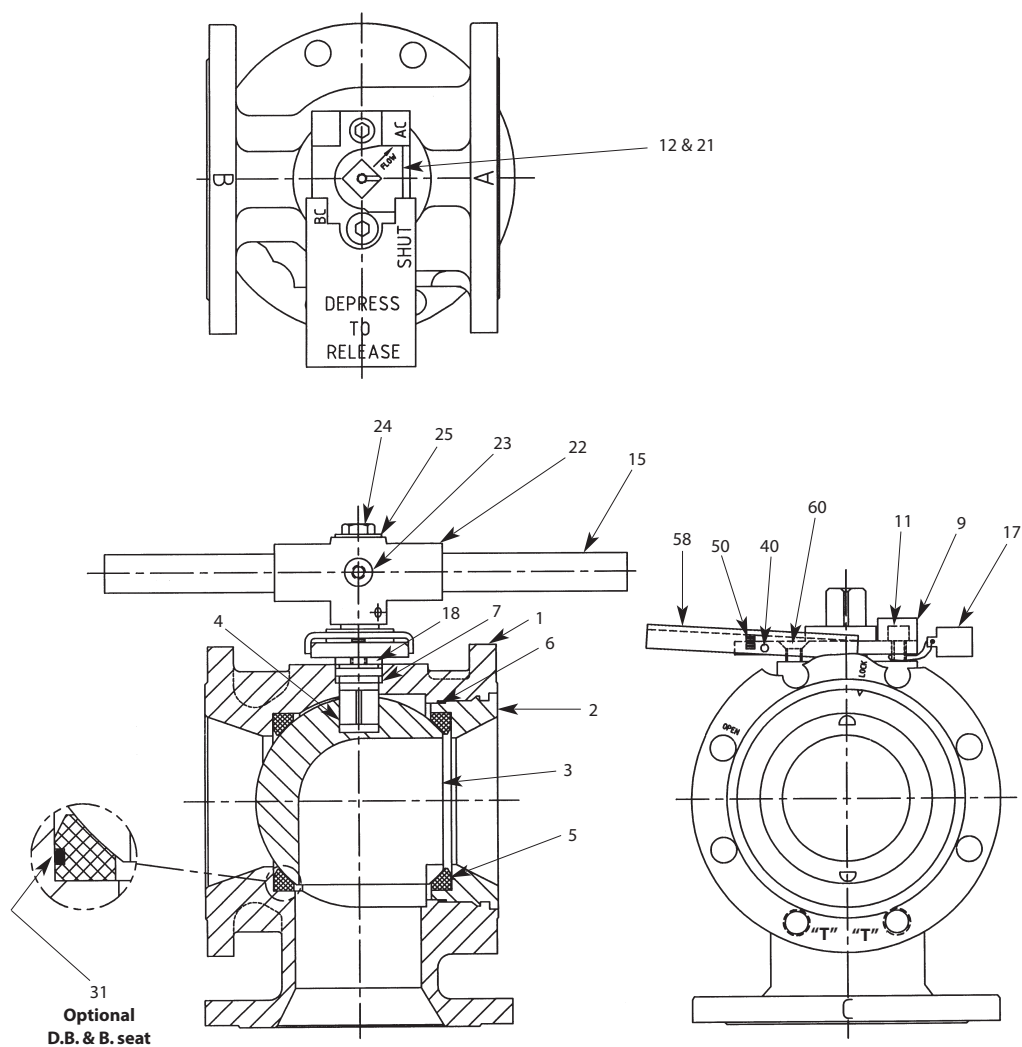


Figure 5.

6" & 8" (DN 150 & 200) DM150FB



“T” – 8” (DN 200) size; 2 holes – 3/4 - 10 NC; 1-1/2” deep

6" & 8" (DN 150 & 200) DM150FB PARTS LIST					
ITEM	PART NAME	QTY.	ITEM	PART NAME	QTY.
1	Body	1	18	Compression Ring	1
2	Insert	1	21	Set Screw	1
3	Ball	1	22	"T" Handle Adapter	1
4	Stem	1	23	Set Screw	1
5	Seat	2	24	Hex. Head Cap Screw	1
6	Body Seal	1	25	Washer	1
7	Stem Seal	2	31	O-Ring (D.B. & B.)	2
9	Bonnet Plate	1	40	Drive Pin	2
11	Bonnet Screw	1	50	Spring	1
12	Indicator Stop	1	58	Positive Stop	1
15	Handle	1	60	Flat Head Machine Screw	1
17	I.D. Tag	1			

Figure 6.

6", 8" & 10" (DN 150, 200 & 250) DM150FD

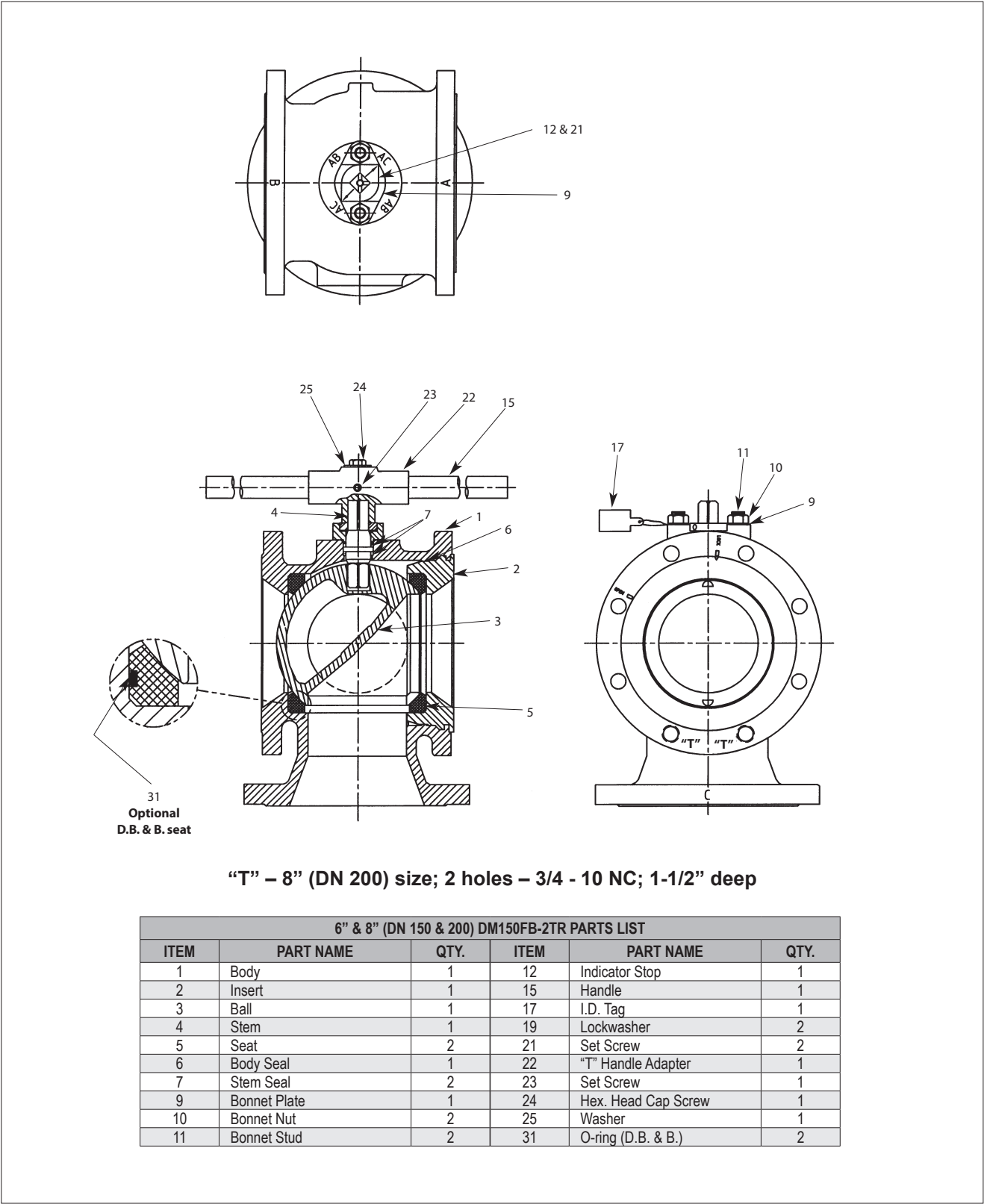
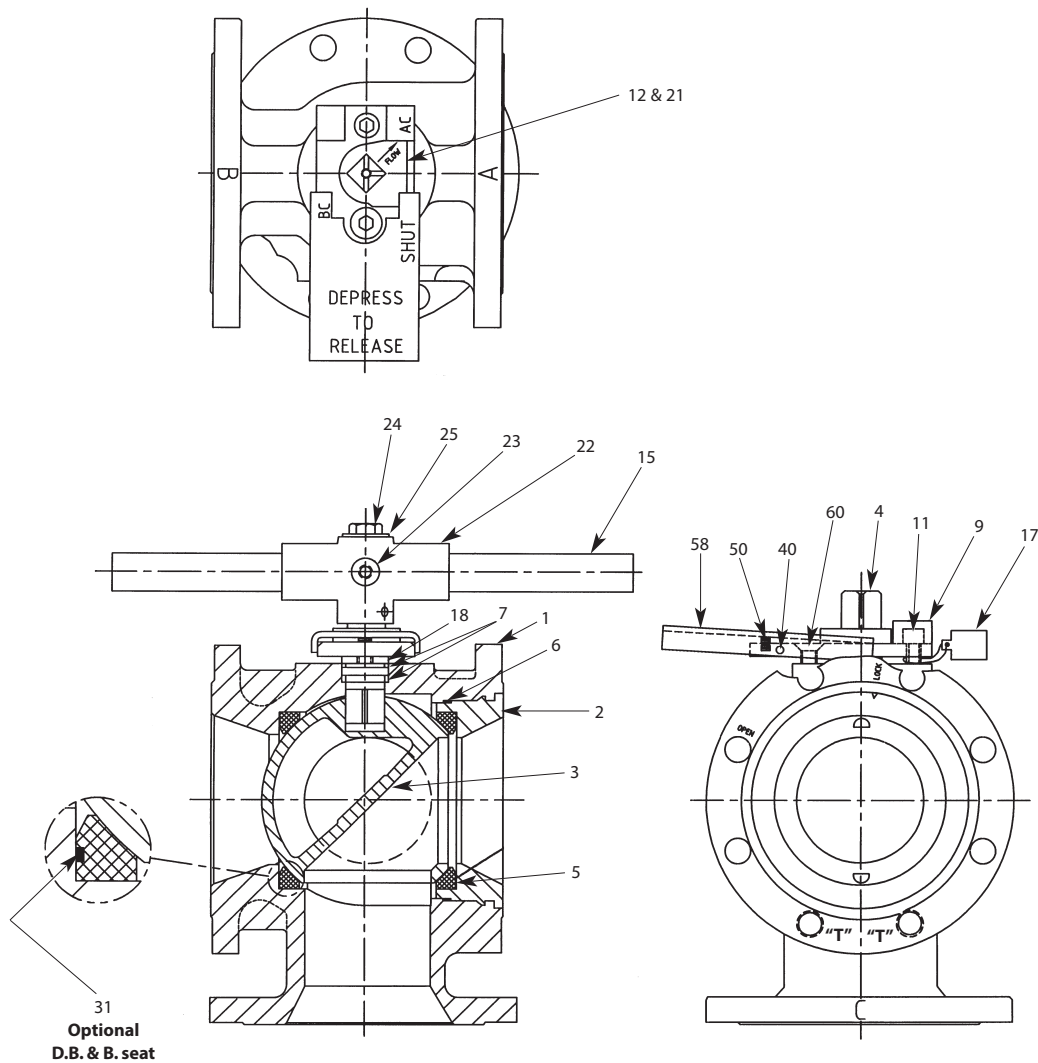


Figure 7.

6", 8" & 10" (DN 150, 200 & 250) DM150FD



"T" – 8" (DN 200) size; 2 holes – 3/4 - 10 NC; 1-1/2" deep

6" & 8" (DN 150 & 200) DM150FB-3TR PARTS LIST					
ITEM	PART NAME	QTY.	ITEM	PART NAME	QTY.
1	Body	1	18	Compression Ring	1
2	Insert	1	21	Set Screw	1
3	Ball	1	22	"T" Handle Adapter	1
4	Stem	1	23	Set Screw	1
5	Seat	2	24	Hex. Head Cap Screw	1
6	Body Seal	1	25	Washer	1
7	Stem Seal	2	31	O-ring (D.B. & B.)	2
9	Bonnet Plate	1	40	Drive Pin	2
11	Bonnet Screw	1	50	Spring	1
12	Indicator Stop	1	58	Positive Stop	1
15	Handle	1	60	Flat Head Machine Screw	1
17	I.D. Tag	1			

Figure 8.

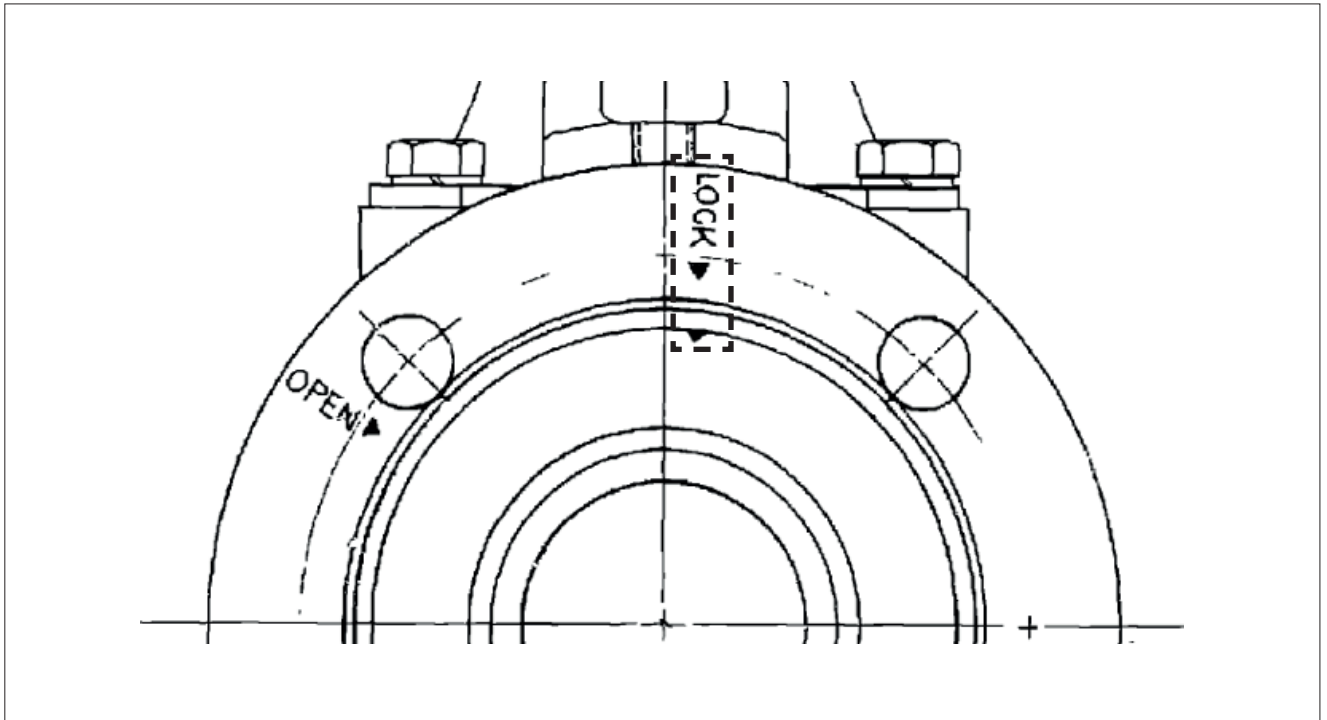


Figure 9. Locked Insert

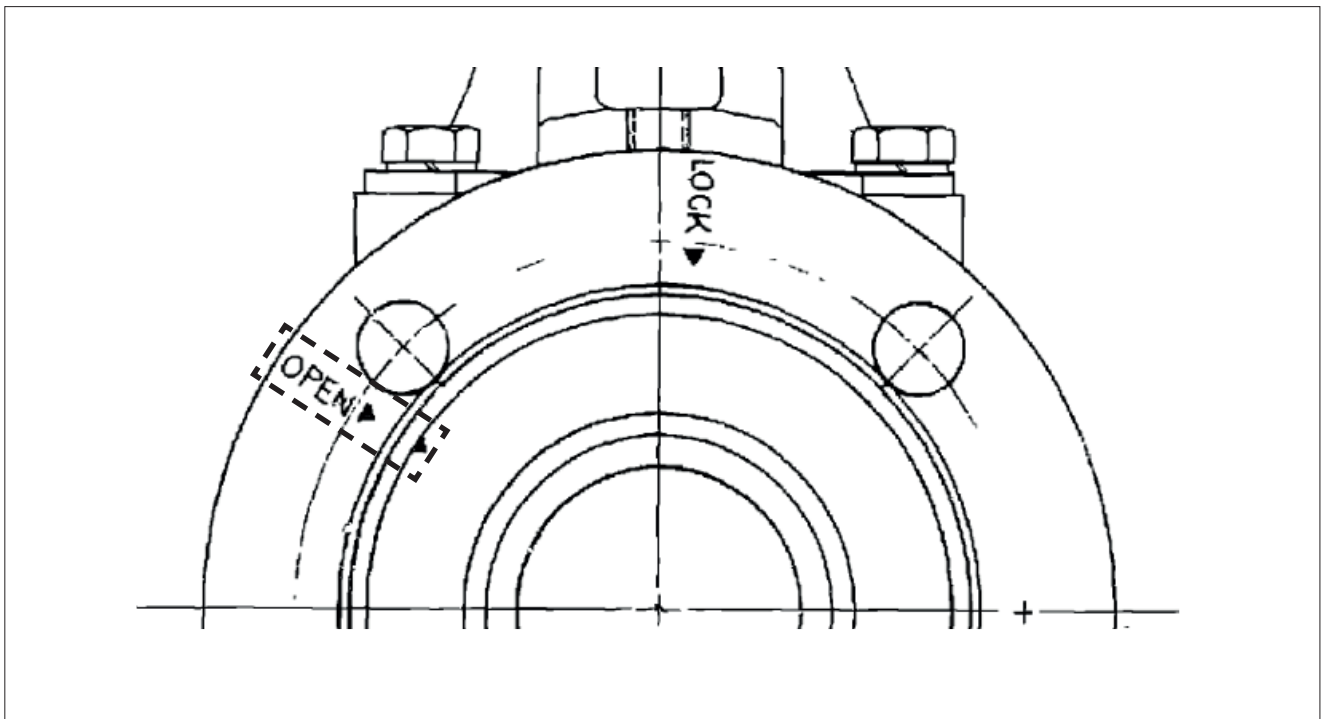


Figure 10. Unlocked (OPEN) Insert

WARNING:

As the use of the valve is application specific, a number of factors should be taken into account when selecting a valve for a given application. Therefore, some of the situations in which the valves are used are outside of the scope of this manual. If you have any questions concerning the use, application or compatibility of the valve with the intended service, contact Valmet for more information.

JAMESBURY BRAND 3-WAY FLANGED BALL VALVE, SERIES AM & DM

1	2	3	4	5	6	7	8	9
4"	AM	150	FB	2TR	DBB	2236	MT	52

1	VALVE SIZE (inch / mm)
INCHES	2, 3, 4, 6, 8, 10, 12
DN	50, 80, 100, 150, 200, 250, 300

2	BODY STYLE
	inches (DN)
AM	2" - 4" (DN50 - 100)
DM	6" - 12" (DN150-300)

3	BODY RATING
150	ASME Class 150

4	PORTS
FB ¹	Bottom ported flanged body
FD ²	Side ported flanged body

5	CONFIGURATION
-	Basic Design
2TR	2 position valve with dual ported ball
3TR	3 position valve with dual ported ball

6	SPECIAL
DBB	Double block and bleed seats

7	BODY / TRIM MATERIAL
2236	Carbon steel body / 316 stainless steel trim
3600	316 stainless steel body / 316 stainless steel trim

8	SEAT / SEAL MATERIAL
TT	PTFE seat / PTFE seals
MT	Filled PTFE Seat / PTFE seals

9	O-RING / STEM SELECTION
2" thru 8"	
52	Buna N
53	Viton
6" thru 12"	
AO	Buna N with operating stem
DO	Viton with operating stem

¹ 2" - 8" only

² Not available with 2TR / 3TR Configuration

Valmet Flow Control Oy

Vanha Porvoontie 229, 01380 Vantaa, Finland.

flowcontrol@valmet.com

Tel. +358 10 417 5000.

www.valmet.com/flowcontrol

Subject to change without prior notice.

Neles, Neles Easyflow, Jamesbury, Stonel, Valvcon and Flowrox, and certain other trademarks, are either registered trademarks or trademarks of Valmet Oyj or its subsidiaries in the United States and/or in other countries.

