

# Jamesbury™ flanged ball valve

Series 7000, standard bore,

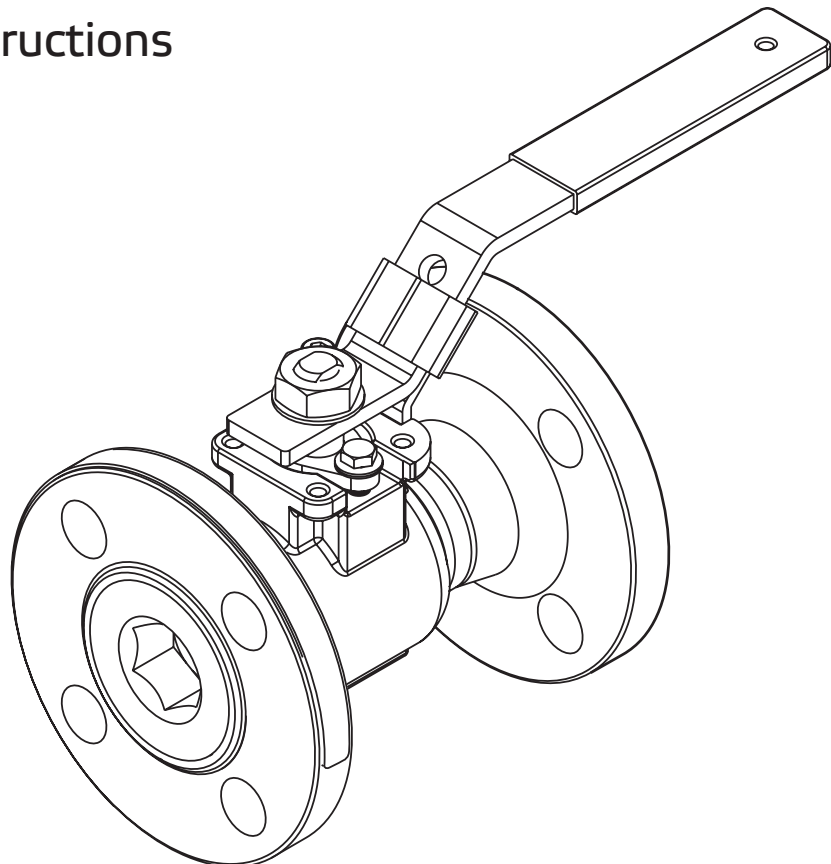
1/2" – 2" (DN 15 – 50)

Series 9000 full bore,

1/2" – 1-1/2" (DN 15 – 40)

with ISO bonnet

Installation, maintenance and  
operating instructions



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**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

This instruction manual contains important information regarding the installation, operation and troubleshooting of the Jamesbury™ DN 15 – 50 Standard Bore Series 7000 and the DN 15 – 40 Full Bore Series 9000 Flanged Ball Valves with ISO Bonnet. Please read these instructions carefully and save for further reference.

## 1.1 WARNING

FOR YOUR SAFETY, TAKE THE FOLLOWING PRECAUTIONS BEFORE REMOVING THE VALVE FROM THE LINE, OR BEFORE ANY DISASSEMBLY.

1. DURING REMOVAL AND DISASSEMBLY, WEAR ANY PROTECTIVE EQUIPMENT NORMALLY REQUIRED TO PROTECT AGAINST DISCHARGE OF TRAPPED FLUID.
2. DEPRESSURIZE THE LINE AND VALVE AS FOLLOWS:
  - A. PLACE THE VALVE IN THE OPEN POSITION AND DRAIN THE LINE.
  - B. CYCLE THE VALVE TO RELIEVE RESIDUAL PRESSURE IN THE BODY CAVITY BEFORE REMOVAL FROM THE LINE.
  - C. AFTER REMOVAL AND BEFORE ANY DISASSEMBLY, CYCLE THE VALVE AGAIN SEVERAL TIMES.
3. **SEAT AND BODY RATINGS** - THE PRACTICAL AND SAFE USE OF THIS PRODUCT IS DETERMINED BY BOTH THE SEAT AND BODY RATING. READ THE NAME TAG 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 RATING. ALL OF THE BODY AND SEAT RATINGS ARE DEPENDENT ON **VALVE TYPE AND SIZE, SEAT MATERIAL AND TEMPERATURE**. DO NOT EXCEED THESE RATINGS.

**NOTE:** OPTIONAL ROUND AND OVAL HANDLES ARE AVAILABLE FOR THESE VALVES IN PLACE OF LEVER HANDLES.

## 2. INSTALLATION

1. Place valve in OPEN position.
2. Valve may be installed for flow in either direction. However, it is recommended that the valve be installed with the insert facing upstream.
3. Use the proper size flange bolts and follow the recommended practices of the gasket manufacturer when tightening the flange bolts.

# 3. MAINTENANCE

1. **Routine Maintenance** consists of tightening the compression plate hex head cap screws periodically to compensate for the wear caused by the stem turning against the stem seals. Check to make sure that the compression plate hex head cap screws are tightened to the torque listed in (Table 1).
2. **Overhaul Maintenance** consists of replacing seats and seals. A standard Service Kit consisting of these parts may be obtained from your Neles Distributor (See Table 4).

**NOTE:** Service Kits contain the seats and stem seals for both the fire-tested and non-fire-tested valves. Refer to the **ASSEMBLY** Section for details on the correct installation of these parts.

TABLE 1A		
Hex Head Cap Screw Torque Standard Bore Series 7000		
Valve Size	Torque IN•LBS	Torque N•m
DN 15 & 20	15	1.7
DN 25	20	2.3
DN 40 & 50	32	3.6

TABLE 1B		
Hex Head Cap Screw Torque Full Bore Series 9000		
Valve Size	Torque IN•LBS	Torque N•m
DN 15	15	1.7
DN 20 & 25	20	2.3
DN 40	32	3.6

## 3.1 DISASSEMBLY

1. Comply fully with the steps in the **WARNING** Section on page 1 prior to working on the valve.
2. Open and close the valve and leave in the closed position.
3. Remove the handle nut (16), lockwasher (19), and handle (17).
4. Remove hex head cap screws (29), disc springs (31) and compression plate (20).
5. Clamp the valve body (1) securely in a vise.
6. Unscrew and remove the insert (2).
7. Remove and discard the old body seal (6). Be careful not to damage the sealing surfaces. May include support ring (9) used with graphite seal.
8. With the ball in the closed position, remove ball (3) and seats (5). **NOTE:** A piece of wood or other soft material may be used to unseat the parts from the opposite side. Be careful not to damage the ball or seating surfaces in the body.
9. Press the stem (4) into the body (1) and remove it through the open end.
10. Carefully pry out and discard the stem seal (8) and stem bearing (24) being careful not to damage the bearing surfaces. **NOTE:** Fire-Tite construction contains a secondary stem seal (7) and 2 stem bearings (13), in place of the non-Fire-Tite stem bearing (24). Also Peek® seats have an additional upper stem bearing (10) and an anti extrusion ring (55).

## 3.2 ASSEMBLY

**NOTE:** Service Kits contain replacement seals for Fire-Tite® and non-Fire-Tite constructions.

1. Inspect the parts to ensure sealing surfaces are in good condition and all parts are properly cleaned and prepared for assembly.
2. Clamp the body (1) securely in a vise with the body joint opening facing up.
3. Insert the seat (5) into the body (1) with the flat side down, as shown in **(Figure 2)**.
4. Place the stem bearing (24) on the stem (4). **NOTE:** Fire-Tite valves have 2 stem bearings (13) and a secondary stem seal (7) as shown in **(Figure 1)**.
5. Insert the stem (4) with the bearing(s) into the valve body and through the stem bore in the body, as shown in **(Figure 1)**.
6. Holding the stem in place from the inside, install the stem seal (8) and the compression plate (20). For Peek seats, install upper bearing (10) and anti extrusion ring (55) into the packing bore prior to installing the stem seal (8).
7. Place the disc springs (31) on the hex head cap screws (29). Disc spring orientation is shown in **(Figure 1)**. Install the hex head cap screws through the compression plate and bring them down hand tight.
8. While pressing the stem (4) outward from inside the body, tighten the hex head cap screws to the torque provided in **(Table 1)**. Apply torque evenly, alternating between the two cap screws so that the compression plate will be parallel with the valve body bonnet.
9. Align the stem to the ball slot. Insert the ball (3) so that the internal stem blade fits into the ball slot.
10. Insert the second seat (5) with the flat facing up. Insert the body seal (6). **NOTE:** Some sizes of graphite body seals contain an additional support ring (9). Install support ring (9) prior to inserting body seal (6).
11. Screw the insert (2) into the body (1) and tighten to the Torque listed in **(Table 2)**.
12. Install handle (17), lockwasher (19) and handle nut (16) and tighten to torque listed in **(Table 3)**.
13. Cycle the valve slowly to ensure smooth operation.

## 4. SERVICE KITS

We recommend that valves be directed to our service center for maintenance. The service centers are equipped to provide rapid turn around at reasonable cost and offer new valve warranty with all reconditioned valves. Standard Service Kits **(Table 4)** include seats, seals, and stem bearings.

## 5. REPAIR KITS/SPARE PARTS

For further information or assistance on repair kits and spare parts visit our website at [www.neles.com](http://www.neles.com)

# 6. EXPLODED VIEW AND PARTS

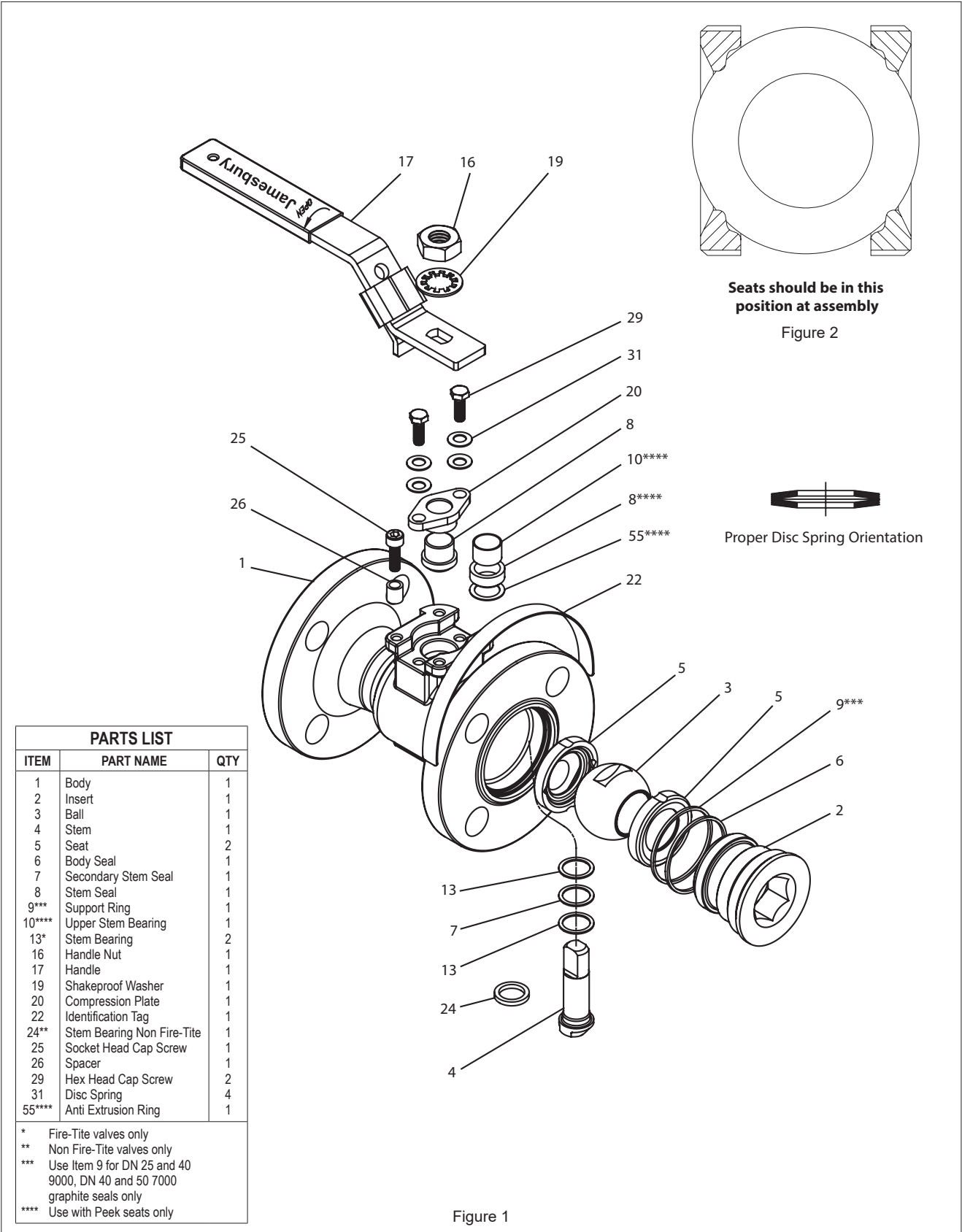


TABLE 2A	
Insert Torques Standard Bore Series 7000	
Valve Size	Torque (N•m)
DN	
15 – 20	136
25	203
40	339
50	476

TABLE 2B	
Insert Torques Full Bore Series 9000	
Valve Size	Torque (N•m)
DN	
15	136
25	203
30	271
40	476

TABLE 3A	
Handle Nut Torque Standard Bore Series 7000	
Valve Size	Torque (N•m)
DN	
15 – 20	12
25	31
40 – 50	45

TABLE 3B	
Handle Nut Torque Full Bore Series 9000	
Valve Size	Torque (N•m)
DN	
15	12
20 – 25	31
40	45

TABLE 4A					
Service Kits Standard Bore Series 7000					
Service Kits	Valve Size				
	DN 15	DN 20	DN 25	DN 40	DN 50
<b>XTREME® Seats</b>	RKN-354-XT	RKN-355-XT	RKN-356-XT	RKN-358-XT	RKN-359-XT
<b>PTFE Seats</b>	RKN-354-TT	RKN-355-TT	RKN-356-TT	RKN-358-TT	RKN-359-TT
<b>DELIRIN Seats</b>	RKN-354-RT	RKN-355-RT	RKN-356-RT	RKN-358-RT	RKN-359-RT
<b>UHMW Seats</b>	RKN-354-UU	RKN-355-UU	RKN-356-UU	RKN-358-UU	RKN-359-UU
<b>PEEK Seats</b>	RKN-354-LG	RKN-355-LG	RKN-356-LG	RKN-358-LG	RKN-359-LG

TABLE 4B				
Service Kits Full Bore Series 9000				
Service Kits	Valve Size			
	DN 15	DN 20	DN 25	DN 40
<b>XTREME® Seats</b>	RKN-354-XT	RKN-356-XT	RKN-357-XT	RKN-359-XT
<b>PTFE Seats</b>	RKN-354-TT	RKN-356-TT	RKN-357-TT	RKN-359-TT
<b>DELIRIN Seats</b>	RKN-354-RT	RKN-356-RT	RKN-357-RT	RKN-359-RT
<b>UHMW Seats</b>	RKN-354-UU	RKN-356-UU	RKN-357-UU	RKN-359-UU
<b>PEEK Seats</b>	RKN-354-LG	RKN-356-LG	RKN-357-LG	RKN-359-LG

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