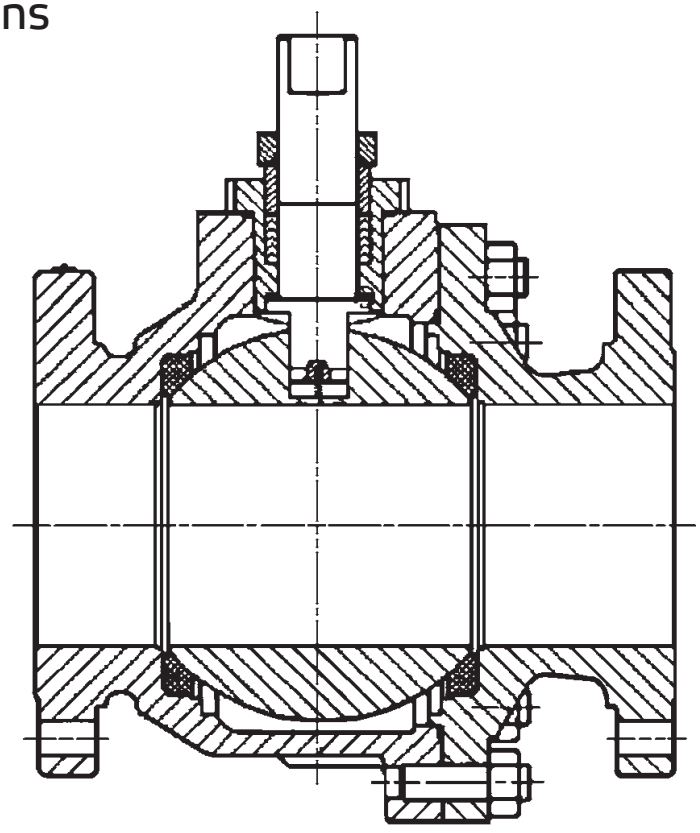
Jamesbury™ flanged ball valves Series 7000 & 9000

Series 9000, Model A, Full Bore, Class 150, 8” (DN 200);
Series 9000, Model B, Full Bore, Class 300, 6” - 8” (DN 150 - 200);
Series 7000, Model A, Standard Bore:
Class 150, 10” (DN 250)
Class 300, 8” & 10” (DN 200 & 250)

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, maintenance, and troubleshooting of Jamesbury™ Series 9000 Soft-Seated Non-Trunnion: 8” (DN 200) Class 150 Full Bore and 6”– 8”(DN 150 – 200) Class 300 Full-Bore and Series 7000 Non-Trunnion 10” (DN 250) Class 150,8”& 10”(DN 200 & 250) Class 300 valves. Please read the 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.

1.1 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 DEVISE. DISCONNECT ANY PNEUMATIC SUPPLY LINES, ANY ELECTRICAL POWER SOURCES AND MAKE SURE SPRINGS IN SPRINGRETURN 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.

2. INSTALLATION

1. Place the valve in the open position.
2. Flow through this *Jamesbury* valve can be in either direction. It is recommended, however, that the valve be installed with the insert facing upstream.

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!

3. If there is weepage past the packing upon installation,the valve may have been subjected to wide temperature variations in shipment. “Leak-tight” performance will be restored by a packing adjustment described in the **MAINTENANCE** Section.

3. MAINTENANCE

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.

WARNING

FOR YOUR SAFETY AND PROTECTION, IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS BE TAKEN PRIOR TO REMOVING THE VALVE FROM SERVICE OR BEFORE ANY DISASSEMBLY OF THE VALVE:

1. WEAR ANY PROTECTIVE CLOTHING OR EQUIPMENT NORMALLY REQUIRED WHEN WORKING WITH THE MEDIA INVOLVED.
2. DEPRESSURIZE THE LINE AND VALVE AS FOLLOWS:
   - **A.** OPEN THE VALVE AND DRAIN THE LINE.
   - **B.** CLOSE AND OPEN THE VALVE TO RELIEVE ANY RESIDUAL PRESSURE THAT MAY BE IN THE VALVE PRIOR TO REMOVING THE VALVE FROM SERVICE. LEAVE THE VALVE IN THE OPEN POSITION.
   - **C.** AFTER REMOVAL AND PRIOR TO ANY DISASSEMBLY, DRAIN ANY REMAINING MEDIA BY PLACING THE VALVE IN THE VERTICAL POSITION AND CAREFULLY OPEN AND CLOSE THE VALVE SEVERAL TIMES.

Routine maintenance consists of tightening the bonnet stud nuts (18) periodically to compensate for stem seal wear. This may be done by tightening the bonnet stud nuts (18) until snug, then tighten an additional 1/4 turn.

3.1 DISASSEMBLY

NOTE: If complete disassembly becomes necessary, replacement of all seats, packing and seals is recommended (**Refer to Repair Kits, Table 2**).

1. Follow the steps in the **WARNING** Section before performing any work on the valve.
2. Open and close the valve and leave in the closed position. We recommend that valves be directed to our service center for maintenance.The service center is equipped to provide rapid turn around at reasonable cost and offers a new valve warranty with all reconditioned valves.
3. Remove the bonnet stud nuts (18), compression plate (10) and gland follower (9).
4. Mark the body joint flanges to assure correct body (1) and body cap (2) orientation during assembly.
5. Remove the body nut studs (16) and remove the body cap (2).
6. Remove the body gasket (65) and the seat (7) from the cap. **BE CAREFUL NOT TO SCRATCH THE BALL.**
7. Remove the ball (3).
8. Remove the stem (5) and stem retainer (8) as a subassembly by removing cap screws (13). It may be necessary to loosen with a block of wood and a hammer.
9. Remove spring (36) from bottom of stem (5).
10. Push down on top of stem (5) to remove it from the stem retainer (8).
11. Remove thrust bearings (70) and also the secondary stem seal (71) from the stem. Pry out the packing (69) from the stem retainer (8). **BE CAREFUL NOT TO SCRATCH ANY SEALING SURFACES.**
12. Remove and discard the stem retainer seal (66) from the body.
13. Remove the second seat (7) from the body (1).
14. If the valve is to be grounded, clean packing bore so that it is free of rust or foreign material.

3.2 ASSEMBLY

1. Clean all valve components.
2. Inspect all components for damage before reassembling the valve. Look for damage to the sealing areas on ball, stem, body and body cap, and look for wear in the bearing areas.
3. Carefully clean and polish the ball sealing surface. It should be free of all scratches and grooves.
4. 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 or return the valve to the factory for service.
5. Standing the body (1) carefully on end, install one seat (7) with the flat surface down.
6. Slide the thrust bearings (70), and secondary stem seal (71) over the top of the stem and down to the stem shoulder. (**See Figure 2 for proper orientation.**)
7. Install spring (36) into bottom of stem by pushing it until it bottoms out.
8. Insert stem subassembly through the stem retainer and install packing. (**If V-ring packing is used, it must be oriented as shown in Figure 2A.**) If valve is to be grounded, remove one middle V-ring and place graphite washer on top of stack. (**See Figure 2B.**)
9. Install the ball (3) rotating it onto the stem (5) in the closed position.
10. Place the stem retainer seal (66) into its position on top of the bonnet (**see Figure 2**).
11. Place the stem retainer subassembly into the body bonnet hole.
12. Align the holes of the stem retainer (8) with the tapped holes in the bonnet. Lubricate the four hex head cap screw (13) threads and bottom of the head with Never-Seez® or equivalent. Place the cap screws through the stem retainer flange and thread them into the body. (**Tighten per Table 1 and Figure 1.**)
13. Gently rock the ball to make sure the stem (5) is centered in the ball slot.
14. Place the body gasket (65) in the body groove.
15. Place the remaining seat (7) on top of the ball.

TABLE 1				
Recommended Torques – FT•LBS (N•m)				
Fastener Size	Fastener Material			
	A193 GR.B7	A193 GR.B8	A193 GR.B7M	A193 B8M
	Fastener Ident. Mark			
	B7	B8	B7M	B8M
1/2" - 13	75 – 85 (102 – 115)"	70 – 85 (95 – 115)"	55 – 65 (75 – 88)"	60 – 75 (81 – 102)
5/8" - 11	160 – 190 (217 – 258)	"155 – 180 (210 – 244)	125 – 145 (169 – 197)	135 – 160 (183 – 217)"
3/4" - 10	250 – 290 (339 – 393)	235 – 275 (319 – 373)	190 – 220 (258 – 298)	205 – 240 (278 – 325)
7/8" - 9	380 – 445 (515 – 603)	290 – 340 (393 – 461)	290 – 340 (393 – 461)	250 – 295 (339 – 400)
1-1/8" - 8	850 – 1000 (1152 – 1356)	526 – 615 (713 – 834)	650 – 760 (881 – 1030)	475 – 555 (664 – 752)

16. Place the body cap (2) over body studs (12) being careful to properly orientate body cap and body as originally assembled by matching orientation marks made prior to disassembly. Take care not to damage body gasket (65) or seat (7) during this operation.
17. Using Never-Seez or equivalent, lubricate the threads and underside of the body stud nuts (16). (**Install and tighten per Table 1 and Figure 1.**)
18. Place the gland follower (9) over the stem so that the beveled side faces up.
19. Place compression plate (10) (inside chamfer down) over the stem (5) and bonnet studs (14). Install bonnet stud nuts (18) on studs (14) and tighten finger tight. If there is weepage past the packing upon installation, "leak-tight" performance may be restored by packing adjustment described in the **MAINTENANCE** Section.
20. Cycle the valve slowly twice to insure permanent position of the ball between the two seats. Tighten bonnet stud nuts (18) 1-1/2 to 2 turns beyond the finger tight condition.

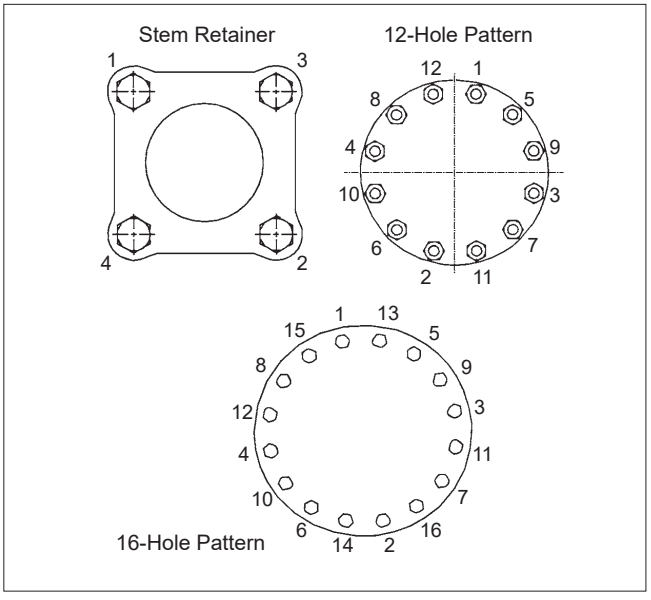


Figure 1.

21. If the valve is to be grounded, test as follows:
    a. Use an ohmmeter accurate to within ±10%.
    b. Check continuity between top of stem and body base metal, ball and body base metal. Precaution should be taken to prevent scratching the ball O.D.
    c. Resistance in either the open,half open or closed position shall not exceed 10 ohms using a source not exceeding 12 volts.

TABLE 2*		
Seat Material	Valve Size, Std. Bore in ( )	
	6" (DN 150) (8" [DN 200])	8" (DN 200) (10" [DN 250])
PTFE (T)	RKN-171-TTT	RKN-172-TTT
FILLED PTFE (M)	RKN-171-MTT	RKN-172-MTT
PFA SEATS & SEALS	RKN-171-BPT	–
XTREME®	RKN-171-XTZ	–
*For grounded valves, grounding washers listed below are also needed when ordering.		
	Valve Size, Std. Bore in ( )	
	6" (DN 150) (8" [DN 200])	8" (DN 200) (10" [DN 250])
Grounding Washer	004-0850-60	004-0851-60

3.3 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.

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!

4. REPAIR KITS

Standard service kits (**Table 2**) include seats, packing, thrust washers and a 316 stainless steel PTFE spiral wound body gasket. The body gasket is suitable for valves with carbon steel or stainless steel trim. Consult the factory for replacement parts of valves with trim other than carbon or stainless steel, and for seat materials not listed.

5. SERVICE/SPARE PARTS

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 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.**

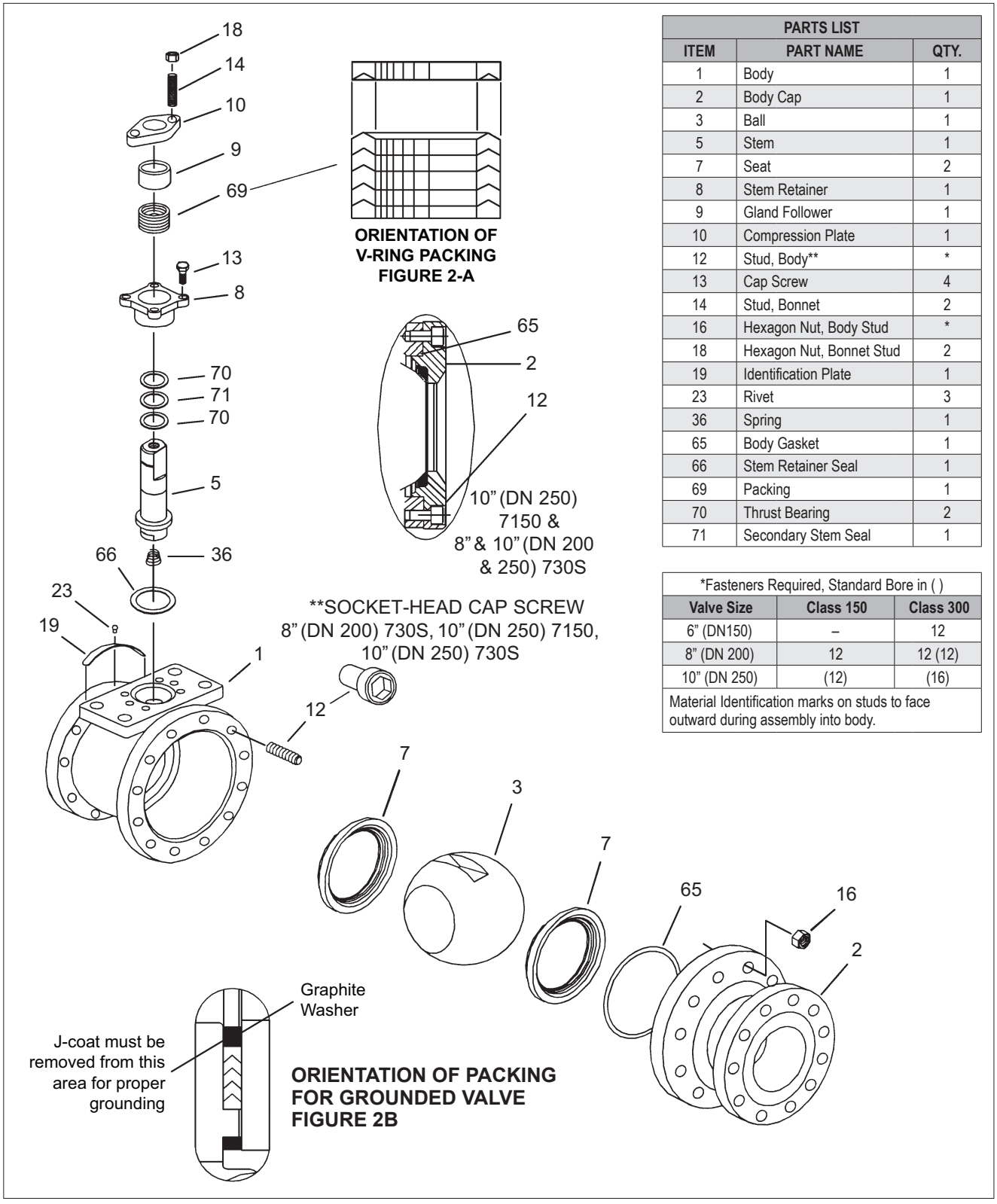
NOTE: When ordering spare parts, always include the following information:

a. Valve catalog code from identification plate.

b. If the valve is serialized – the serial number (from identification plate).

c. From **Figure 2**, the ballooned part number, part name and quantity required.

6. EXPLODED VIEWS AND PART LIST



PARTS LIST		
ITEM	**PART NAME**	**QTY.**
1	Body	1
2	Body Cap	1
3	Ball	1
5	Stem	1
7	Seat	2
8	Stem Retainer	1
9	Gland Follower	1
10	Compression Plate	1
12	Stud, Body**	*
13	Cap Screw	4
14	Stud, Bonnet	2
16	Hexagon Nut, Body Stud	*
18	Hexagon Nut, Bonnet Stud	2
19	Identification Plate	1
23	Rivet	3
36	Spring	1
65	Body Gasket	1
66	Stem Retainer Seal	1
69	Packing	1
70	Thrust Bearing	2
71	Secondary Stem Seal	1

*Fasteners Required, Standard Bore in ( )		
Valve Size	**Class 150**	**Class 300**
6" (DN150)	–	12
8" (DN 200)	12	12 (12)
10" (DN 250)	(12)	(16)
Material Identification marks on studs to face outward during assembly into body.		

Figure 2.

7. CE AND ATEX MARKING

When applicable, the valve meets the requirements of the European Directive 2014/68/EU relating to pressure equipment, and has been marked according to the Directive.

When applicable, the valve meets the requirements of the European Directive 2014/34/EU relating to equipment and protective systems intended for use in potentially explosive atmospheres, and has been marked according to the Directive.

Refer to EU Declaration of Conformity below, for product details

8. EU DECLARATION OF CONFORMITY

EU DECLARATION OF CONFORMITY

for ATEX approved valves

Manufacturer:
Valmet Flow Control Inc.
Shrewsbury, MA 01545-8044
USA
*Valmet Flow Control (Jiaxing) Co., Ltd.
Jiaxing, China
*) Also manufactures certain series

EU Authorised Representative: Valmet Flow Control Oy, Vanha Porvoontie 229, 01380 Vantaa, Finland. Contact details: +358 10 417 5000

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product:	Jamesbury Threaded/Welded End & Flanged Ball valves
Type:	1/4" – 2" 4000 & Eliminator Series (** 1/2" – 24" 7000 & 9000 Series (**
ATEX group and category:	II 2 GD, II 3 GD
Ex GAS:	Ex h IIC 85°C…Tmax Gb/Gc
Ex DUST:	Ex h IIIC T85°C…T(Tmax) Db/Dc

Tmax= valve max. temperature in name plate

(** Dependent on valve code designation.

Manufacturer's certificates:

Standard / Directive	Notified Body and NoBo number	Certificate No.
ISO 9001:2015	LRQA (Certification body)	10531829
PED 2014/68/EU Module H	DNV Business Assurance Italy S.r.l. 0496	142306-2013-CE-FIN-ACCREDIA
ATEX 2014/34/EU Annex IV	DNV Product Assurance AS Norway 2460	Presafe 18 ATEX 91983Q Issue 6

ATEX 2014/34/EU Annex VIII technical files are archived by Notified Body number 0537

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

PED 2014/68/EU	Valve
ATEX 2014/34/EU	Non-electrical equipment

Main components:

Valve:
The valve is suitable for service up to PED Cat III
Valve design standard: ASME B16.34

Installation, Maintenance and Operating instructions manual (IMO) must be followed before installation in order to ensure proper and safe mounting and usage of equipment.

The product above is manufactured in compliance with the applicable European directives and technical specifications/standards EN10204:3.1. The product is in conformity with the customer order.

Instrumentation and accessories having equal protection concept, level and performance specification with the original can be presumed to be in conformity with this Declaration of Conformity.

Protection from e.g. static electricity caused by the process or connected equipment must be considered by the user (EN 60079-14 § 6). EN 60079-19 applies for modifications.

Non-electrical equipment is according EN 80079-37:2016 and EN 80079-36:2016. The actual surface temperature of non-electrical equipment is depended on the process and ambient conditions (EN 80079-36:2016 § 6.2.5 and 6.2.7). The protection from high or low temperature must be considered by the end user before put into service.

The product does not possess any residual risk according to hazard analysis conducted under the applicable directives providing that the procedures stated by the IMO are followed and the product is used under conditions mentioned in the technical specifications.

Documents with digital and/or e-signature conveyed by Valmet Flow Control conform to the Regulation (EU) No 910/2014 as well as the national code on e-signatures. In order to secure the integrity of the document, the authenticity of the sender, and indisputableness of the dispatch the identification is covered by individual ID codes, passwords, and by regularly changing passwords. The authorization to sign documents is based on organizational position and/or is task related. The impartial third party in the company bestows the access right with predefined authorities to particular databases.

Shrewsbury 10.9.2024

Juha Virolainen, Global Quality Director

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