

Jamesbury™ Emission-Pak™ Model C flanged ball valves Series 7000 & 9000

Series 7000, Model C, Standard bore,
Class 150 & 300, 1/2" - 2" (DN 15 - 50);
Series 9000, Model C, Full bore,
Class 150 & 300, 1/2" - 1-1/2" (DN 15 - 40)

Installation, maintenance and
operating instructions

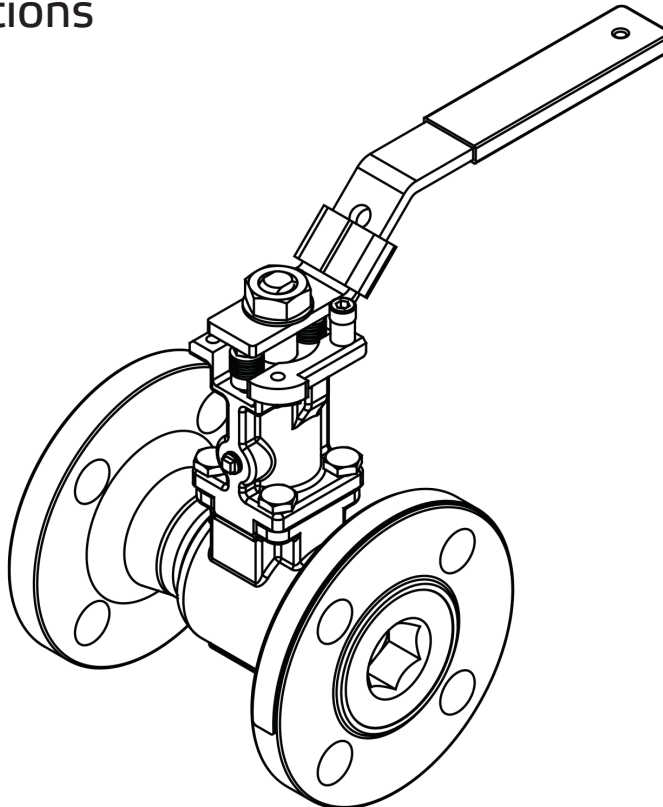


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READ THESE INSTRUCTIONS FIRST!

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™ *Emission-Pak* assembly for 1/2" – 2" (DN 15 – 50) Standard Bore Series 7000 1/2" – 1-1/2" (DN 15 – 40) Full Bore Series 9000 Flanged Ball Valves Model C with ISO Bonnet. Please read these instructions carefully and save for further 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 DEVICE. 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 (SEE FIGURE 2).

2. INSTALLATION

1. Place valve in the 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.

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. 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, IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS BE TAKEN PRIOR TO REMOVAL OF THE VALVE FROM THE LINE OR BEFORE ANY DISASSEMBLY.

1. WEAR ANY PROTECTIVE CLOTHING OR EQUIPMENT NORMALLY REQUIRED WHEN WORKING WITH THE FLUID INVOLVED.
2. DEPRESSURIZE THE LINE AND CYCLE THE 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.

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

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 Repair Kit consisting of these parts may be obtained from your Valmet Distributor (See **Table 4**).

NOTE: Repair 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
1/2" & 3/4" (DN 15 & 20)	15	1.7
1" (DN 25)	20	2.3
1-1/2" & 2" (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
1/2" (DN 15)	15	1.7
3/4" & 1" (DN 20 & 25)	20	2.3
1-1/2" (DN 40)	32	3.6

3.1 DISASSEMBLY

1. Comply fully with the steps in the **WARNING** Sections 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. Remove *Emission-Pak* housing from body (1).
6. Clamp the valve body (1) securely in a vise.
7. Unscrew and remove the insert (2).

NOTE: Use caution when loosening the insert, especially during the initial break.

8. Remove and discard the old body seal (6). Be careful not to damage the sealing surfaces.
9. 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.
10. Carefully pry out and discard *Emission-Pak* body seal (105) and *Emission-Pak* body gasket (106) being careful not to damage the sealing surfaces.

3.2 ASSEMBLY

NOTE: Repair 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) and bearing strip (109) 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 *Emission-Pak* housing (101). Insert 1 set of V-ring packing (104) over the stem as shown in **Figure 3**, slide lantern ring (103) over stem and another set of V-ring packing (104) over stem.
6. Hold stem (4) in place and slide compression plate (20) over stem.
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. Place the *Emission-Pak* body seal (105) in bore of body (1) as shown in **Figure 1**. Place *Emission-Pak* body gasket (106) in bore of body (1) as shown in **Figure 1**.
9. Insert *Emission-Pak* housing (101) into stem bore of body, being careful not to pinch *Emission-Pak* body gasket (106). Insert 4 hex head cap screws (102) through *Emission-Pak* housing into threaded holes in body (1). Tighten per torque in **Table 5**. Apply torque evenly, alternating in a crisscross pattern.

10. While pulling the stem (4) outward, 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.
11. Align the stem to the ball slot. Insert the ball (3) so that the internal stem blade fits into the ball slot.
12. Insert the second seat (5) with the flat facing up. Insert the body seal (6).
13. Screw the insert (2) into the body (1) and tighten to the Torque listed in **Table 2**.
14. Install handle (17), lockwasher (19) and handle nut (16) and tighten to torque listed in **Table 3**.
15. Cycle the valve slowly to ensure smooth operation.

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. SERVICE / SPARE PARTS

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 Repair Kits (**Table 4**) include seats, seals, and stem bearings.

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. Standard Repair Kits (**Table 4**) include seats, seals, and stem bearings.

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 1**, the ballooned part number, part name and quantity required.

5. EXPLODED VIEW AND PART LIST

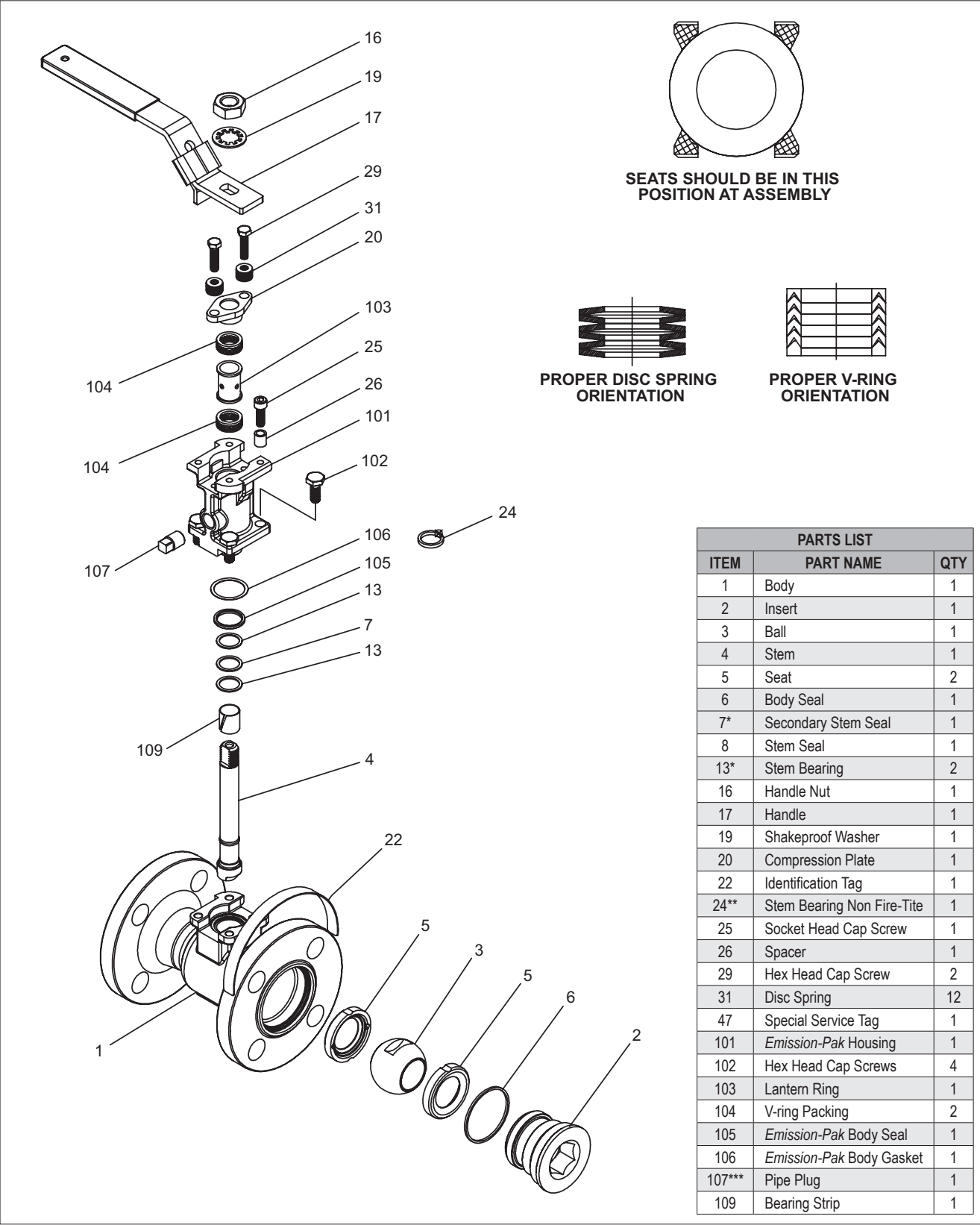


Figure 1.

6. VALVE CODES

TABLE 2A		
Insert Torques Standard Bore Series 7000		
Valve Size		Torque – FT•LBS (N•m)
inches	DN	
1/2 – 3/4	15 – 20	100 (136)
1	25	150 (203)
1-1/2	40	250 (339)
2	50	350 (476)

TABLE 2B		
Insert Torques Full Bore Series 9000		
Valve Size		Torque – FT•LBS (N•m)
inches	DN	
1/2	15	100 (136)
3/4	20	150 (203)
1	25	200 (271)
1-1/2	40	350 (476)

TABLE 3A		
Handle Nut Torque Standard Bore Series 7000		
Valve Size		Torque – FT•LBS (N•m)
inches	DN	
1/2 – 3/4	15 – 20	9 (12)
1	25	23 (31)
1-1/2, 2	40, 50	33 (45)

TABLE 3B		
Handle Nut Torque Full Bore Series 9000		
Valve Size		Torque – FT•LBS (N•m)
inches	DN	
1/2	15	9 (12)
3/4 – 1	20 – 25	23 (31)
1-1/2	40	33 (45)

TABLE 4						
Repair Kits 7000/9000 Model C						
Repair Kits	Valve size – Standard Bore (Full Bore)					
Valve Size	1/2" (1/2") DN 15 (DN 15)	3/4" DN 20	1" (3/4") DN 25 (DN 20)	(1") (DN 25)	1-1/2" (1-1/2") DN 40 (DN 40)	2" (DN 50)
Xtreme® Seats	RKN-406XT	RKN-407XT	RKN-408XT	RKN-409XT	RKN-410XT	RKN-411XT
PTFE Seats	RKN-406TT	RKN-407TT	RKN-408TT	RKN-409TT	RKN-410TT	RKN-411TT
PEEK Seats	RKN-406LG	RKN-407LG	RKN-408LG	RKN-409LG	RKN-410LG	RKN-411LG
PFA Seats	RKN-406BT	RKN-407BT	RKN-408BT	RKN-409BT	RKN-410BT	RKN-411BT

TABLE 5		
Emission-Pak Housing Cap Screw (102) to Body (1) Torque		
	M5 (1/2" – 3/4")	1/4 – 20 (1" – 2")
Bolt Material	Torque FT•LBS (N•m)	Torque FT•LBS (N•m)
B7, K-Monel	6 (8)	10 (13)
B8	6 (8)	9 (12)
B7M, B8M	5 (7)	8 (11)

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](tel:+358104175000)

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

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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:	Ex 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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