

ISO 15848-1 QUALIFICATION CERTIFICATE



Certificate No.: 324039

Ref. Test report No.: 324040

We hereby certify that the valve below has passed the fugitive emission test successfully according to Class BH of ISO 15848-1: 2015 + A1:2017 for a total of **20000** cycles.

Name of manufacturer	JDV CONTROL VALVE CO., LTD.
Address of manufacturer	No.6-1, Qingnian Road, Yangmei District, Taoyuan City, Taiwan, China
Item	Control Ball Valve
Valve size	NPS 4 (DN100)
Pressure rating	600LB (PN100)
Stem size	Φ48 mm
Body/Cap material	A105N
Seat	GRAPHITE
Packing	GRAPHITE
Valve assembly drawing no.	V2C30482501

The tested valve covers performance class (para.6.6):

ISO FE BH – CC1 – SSA1 – t400°C – CL600 – ISO 15848-1

Extension of qualification (in particular) to untested valves in accordance with paragraph 8 of ISO 15848-1.

Other stem sizes qualified: 24 mm up to 96 mm

Other pressure ranges qualified: CL600 LB and lower

This certificate must be read in conjunction with test report No.: 324040

Shanghai, July 03, 2025
(Place, date)


Zhujun XU
TÜV SÜD Certification and Testing (China)
Co., Ltd. Shanghai Branch

TÜV SÜD Certification and Testing (China) Co., Ltd.
Shanghai Branch.
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Test Report

(Valve fugitive emission test according to ISO 15848-1:2015+A1:2017)

Certificate No.: 324039
Test Report No.: 324040

Applicant / Manufacturer: JDV CONTROL VALVE CO., LTD.

No.6-1, Qingnian Road, Yangmei District,

Taoyuan City, Taiwan, China

Inspection body: TÜV SÜD Certification and Testing (China) Co., Ltd.

Shanghai Branch.

Floor 3-13, No.151, Heng Tong Road, Shanghai, P. R. China

Lab of test: Shanghai Inspection & testing Institute of Instruments
and Automation Systems Co., Ltd.

Test Date: May 26~ May 27, 2025

Description of valves: DN100 CL600LB Control Ball Valve

Size: DN100

Pressure Rating: CL600LB

Drawing No.: V2C30482501

Test Witnessed By: Zhujun Xu / TÜV SÜD Inspector

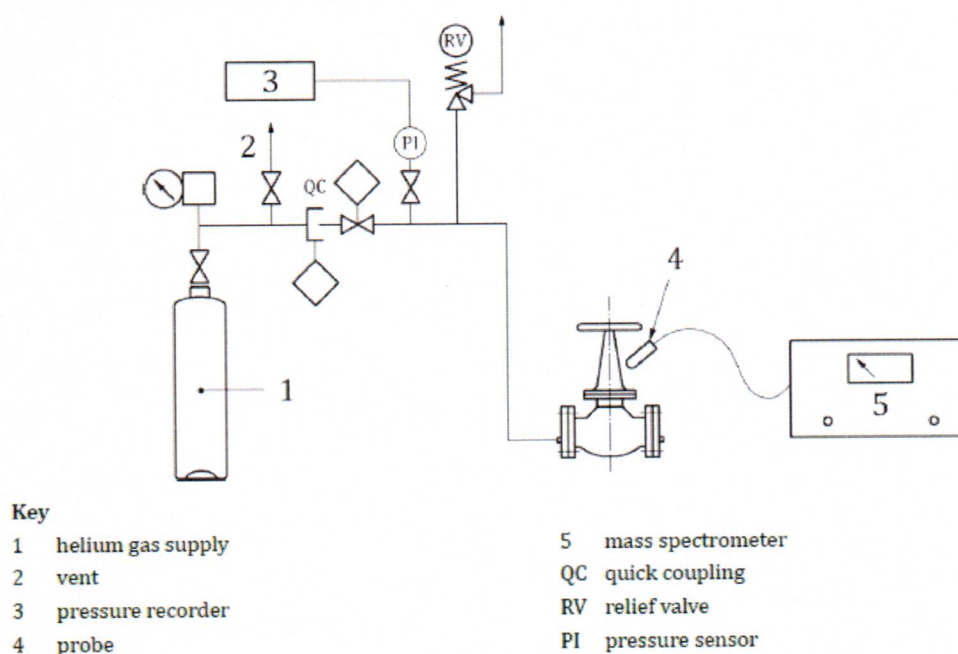
Test Report No.: 324040

Inspection and Tests

1. Conformity of Equipment

The test equipment was verified by TÜV SÜD inspector according to requirements of ISO 15848-1:2015+A1:2017 and found satisfactory. The detailed arrangement of the fugitive emission test equipment is shown below:

Figure 2 Local measurement by sniffing method



2. Document review: Annexes 1) and 2)

The specific product data file provided by the valve manufacturer includes:

- cross sectional valve assembly drawing;
- bill of valve material
- stem or shaft seal description, dimension and specifications;
- body seal description, dimension and specifications;
- material specifications of stem or shaft seal components;
- hydrostatic test certificate.

The above documents are reviewed with no objection.

3. Technical Data of Test Valve:

General description of test valve

Name of manufacturer	JDV CONTROL VALVE CO., LTD.
Address of manufacturer	No.6-1, Qingnian Road, Yangmei District, Taoyuan City, Taiwan, China
Item	Control Ball Valve
Valve size	NPS 4 (DN100)
Pressure rating	600LB (PN100)
Stem size	Φ48 mm
Body/Cap material	A105N
Seat	GRAPHITE
Packing	GRAPHITE
Valve assembly drawing no.	V2C30482501

4. Visual and dimensional check of the test valve:

The test valve was chosen at random by the manufacturer in its workshop and submitted to the laboratory. The visual and dimensional check was performed according to drawing No.: V2C30482501 and the results found satisfactory.

Manufacturer` Brand	Size	Class	Material
The stem size was measured as Ø 48 mm.			

5. Preparation of the test valve:

Before the fugitive emission test, the test valve was tested and accepted in accordance with relevant standard, the test showed no visible leakage or deformation. Then the valve was cleaned and dried, and the packing was not changed.

6. Calibration of test instrument

The test instrument was turned on, warmed up at the minimum time according to the requirements of the equipment manufacturer and calibrated with the standard calibrated leak 99.99% helium according to the procedure specified in Annex A, Para.A.1.4.2 of ISO 15848-1:2015+A1:2017.

7. Fugitive emission test and measurement

The test valve was mounted on a test rig with the stem positioned vertical. The valve was operated by motor mechanism. And the fugitive emission test is carried out as per requirement of ISO 15848-1:2015+A1:2017 Para.5. Valve operating is based on rising and the drive system of test is based on dynamic drive.

7.1 Preliminary tests at room temperature (test 1)

The valve was pressurized with test fluid Helium to 10.0 MPa@RT or 6.94MPa@400°C, according to manufacturer's requirements in the partly opened position, the temperature at locations "X"/"Y"/"Z" are measure and recorded as room temperature.



The stem seal and body seal leakage measurement were performed by the sniffing method as described in ISO 15848-1 annex A and annex B respectively.

7.2 a) Mechanical cycle test at the room temperature (test 2) and then total two cycles of thermal cycles (RT~400°C) with total mechanical cycles of 20000 were performed with the positive result.

The detailed result see the test report no.J25-125-WT-04 provided by the manufacturer and lab.

The final test results are as follows:

Test results of tests

Item	ISO15848-1 Required Value	Actual Value
Stem leakage (mbar·l·s ⁻¹)	$\leq 8.54 \times 10^{-5}$	Max. 3.35×10^{-7}
Body seal leakage(ppmv)	≤ 50	Max.41
The test results meet the requirements of ISO 15848-1:2015+A1:2017.		

8. Post test examination

After all the above tests completed, the test valve was disassembled and all sealing component visually examined. It is found that no notable wear and any other significant observations.

9. Performance classes

As a result of the above tests, the test valve covered performance classes as follows:

ISO FE BH – CC1 – SSA1 – t400°C – CL600 – ISO 15848-1

10. Extension of qualification to untested valves shall be according to ISO 15848-1:2015+A1:2017 paragraph 8.

We, hereby declare that I have checked test valve and witnessed the fugitive emission test on the tested valve according to ISO 15848-1: 2015+A1:2017. The test results are as mentioned in this report.

TÜV SÜD Certification and Testing (China) Co., Ltd.
Shanghai Branch.

Zhujun Xu

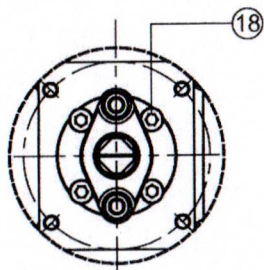


Date: July 03, 2025

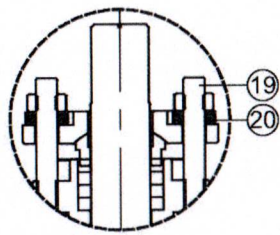
Annexes:

- 1) Copy of Drawing No.: V2C30482501;
- 2) Test Report of Fugitive Emission Test No. no. J25-125-WT-04.

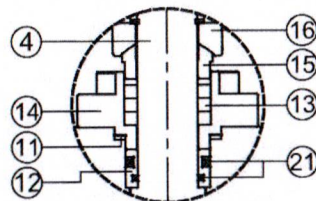
ASME Class 600 Full-Bore 2-PC Floating Metal-Seat Ball Valve



VIEW A



LIVE LOADING DESIGN



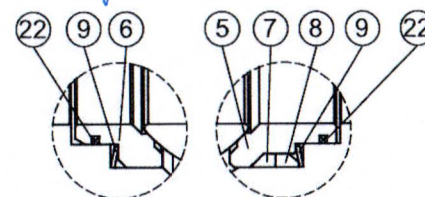
Detail C

TÜV SÜD Certification and Testing (China) Co., Ltd.
Industry Service

☒ reviewed
☐ witnessed

by

dated



A → B

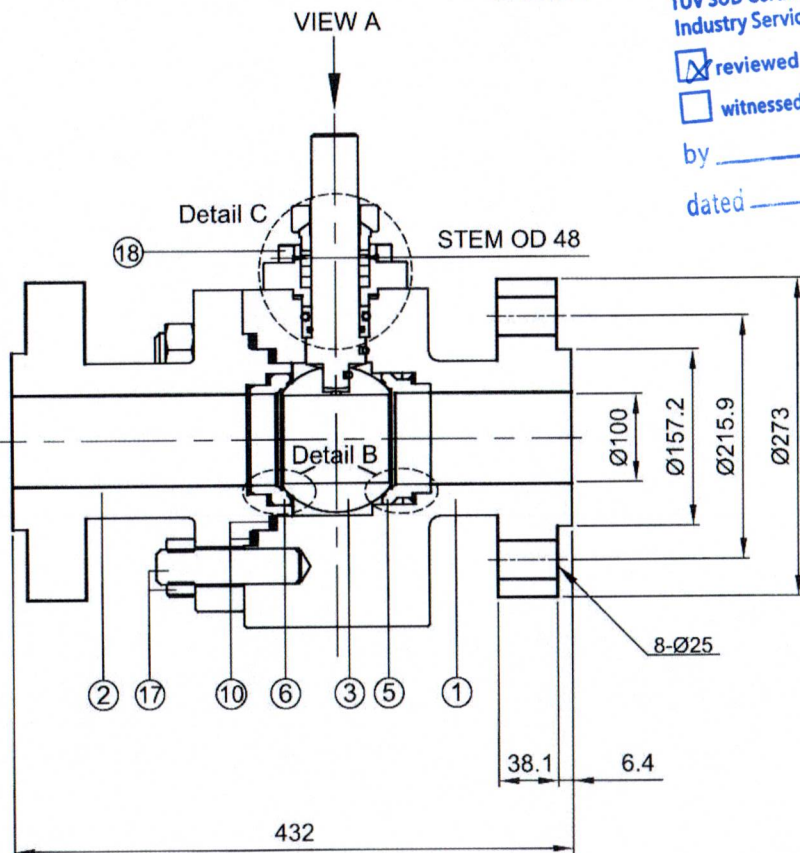
Detail B

APPLICABLE STANDARDS :

DESIGN		ASME B16.34
FACE TO FACE		ASME B16.10
FLANGED DIMENSIONS		ASME B16.5
TEST	BODY PRESSURE	API 598
	SEAT LEAKAGE	ANSI/FCI 70-2
MARKING		MSS-SP-25

MATERIALS :

NO	PART NAME	QTY	MATERIAL
1	BODY	1	A105N
2	CAP	1	A105N
3	BALL	1	A182-F316+CRC
4	STEM	1	A453-S66286(A286)+QPQ
5	BODY SEAT	1	A479-316+CRC
6	CAP SEAT	1	A479-316+CRC
7	SEAT GASKET	1	GRAPHITE
8	SEAT RETAINER	1	A479-316
9	SEAT SPRING	2	INCONEL X-750
10	BODY GASKET	2	316SS+GRAPHITE
11	BODY GLAND GASKET	1	GRAPHITE
12	STEM RETAINER	1	A479-316+QPQ
13	GLAND PACKING	1	GRAPHITE
14	BODY GLAND	1	A479-316
15	GLAND FOLLOWER	1	A479-316+QPQ
16	GLAND FLANGE	1	A351-CF8
17	BOLT & NUT	8	A193-B7 & A194-7
18	BODY GLAND BOLT	6	A4-80
19	GLAND BOLT & NUT	2	A193-B7 & A194-7
20	BELLEVILLE WASHER	10	INCONEL X-750
21	VOC PACKING	2	GRAPHITE
22	ANTI JAM	2	GRAPHITE



JDV CONTROL VALVES CO., LTD

DRAWN BY
CHECK
APPROVE

Zoe Chang
2025/06/19
Sandra Tseng
2025/06/19
Sandra Tseng
2025/06/19

SCALE
DATE

FREE
UNIT
2025/03/07

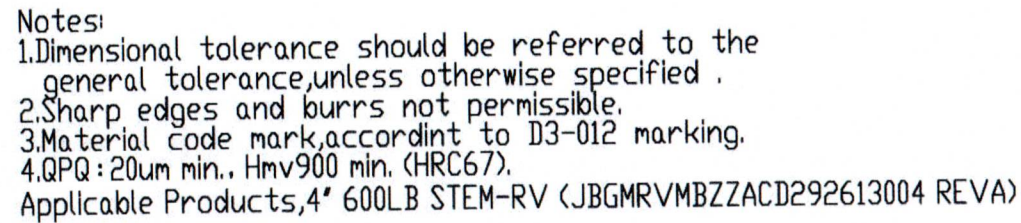
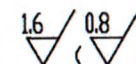
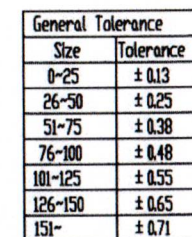
mm
REV
1.0

JB-F-M / F / L

DRAWING NO. V2C30482501

REVISED

MARK	DATE	DESCRIPTION



MATERIAL
A453-S66286(A286)+QPQ

 JDV CONTROL VALVES CO., LTD	DRAWN BY	Zoe Chang 2025/06/19	SCALE	FREE	UNIT	mm	JB-F-M / F / L STEM	REVISED						
	CHECK	Sandra Tseng 2025/06/19			REV.	1:0								
	APPROVE	Sandra Tseng 2025/06/19	DATE	2025/03/07		DRAWING NO.			V2C30482501S		MARK	DATE	DESCRIPTION	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	

DOCUMENT NO. D4-029