



TECHNICAL STANDARDS &
SAFETY AUTHORITY
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario
Canada M8X 2X4

Show facsimile of manufacturer's logo or trademark, as it will
appear on the fitting, in the space below

STATUTORY DECLARATION

Registration of Fittings

I, Stephen Dalton, Chief Engineer

(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of Val-Matic Valve & Manufacturing Corporation

(Name of Manufacturer)

Located at 905 Riverside Drive, Elmhurst, IL 60126

(Plant Address)

(630) 941-7600

(Telephone No.)

(630) 941-8042

(Fax No.)

☒ do solemnly declare that the fittings listed hereunder, which are subject to the **Technical Standards and Safety Act**, Boilers and Pressure Vessels Regulation, comply with all of the requirements of
ADI6D and ASME B16.34

(Title of recognized North American Standard)

which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

☐ or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with
_____ as supported by the attached data which identifies the dimensions, material of construction,
pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO
9001-2008 which has been verified by the following authority, Lloyd's Register Quality Assurance, Inc.

The items covered by this declaration, for which I seek registration, are category C type fittings. In support of
this application, the following information and/or test data are attached as follows:

QuadroSphere Trunnion Mounted Ball Valves Bulletin #4700 with supporting dimensional drawings.

(drawings, calculations, test reports, etc.)

Declared before me at Val-Matic Valve in the MORNING of Thursday
the 5th day of February AD 20 15.

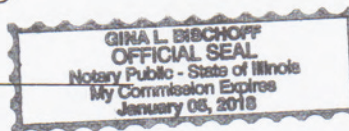
Commissioner for Oaths:

Gina Bischoff

(Printed name)

Gina Bischoff

(Signature)



Stephen Dalton

(Signature of Declarer)

FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the
Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, and
CSA Standard B51 and is accepted for registration in Category C.

CRN: OC17963.5

Registered by: K. Kin

Dated: Sept. 25/15

NOTE: This registration expires on: Sept. 25/2025

Technical
Standards
and Safety
Authority

Boilers and
Pressure Vessels
Safety Program

REGISTERED

CRN: OC17963.5

Signed: K. Kin

Date: Sept. 25/15

See registration and one sheet of attachment
letter
for scope. KK 9/25/15

QuadroSphere
Trunnion Mounted Ball Valve
Design Summary

Valve Description			Wall Thickness									Flange Thickness		
Valve Size NPS	API 6D Valve Class	ASME Std.	ASME B16.34 Min. Wall mm	Inside Radius of Body "R" mm	Design Pressure "P" Mpa	Joint Efficiency No Welds "E"	Body Thkns. "t" mm	Circumferential Hoop Stress "S" Mpa	Allowable Stress Material: A105M "SA" Mpa	Hoop Stress ("S") is below "SA"	Meets or Exceeds Minimum Wall	ASME B16.5 Min. Flange mm	Flange Thkns. t _f mm	Meets or Exceeds Minimum Flange
2	150	B16.34 & VIII	6.3	45	2	1	15.0	7.2	138	Yes	Yes	14.3 ⁽¹⁾	16.0	Yes
2	300	B16.34 & VIII	7.4	45	5	1	15.0	18.0	138	Yes	Yes	20.7	23.0	Yes
2	600	B16.34 & VIII	8.9	45	10	1	29.7	21.2	138	Yes	Yes	25.4	26.0	Yes
2	900	B16.34 & VIII	11.9	45	15	1	35.0	28.3	138	Yes	Yes	38.1	38.5	Yes
2	1500	B16.34 & VIII	19.1	45	25	1	35.0	47.1	138	Yes	Yes	38.1	38.5	Yes
2	2500	B16.34 & VIII	33.2	45	42	1	47.5	65.0	138	Yes	Yes	50.9	51.0	Yes
3	150	B16.34 & VIII	7.0	67.5	2	1	34.5	5.1	138	Yes	Yes	17.5 ⁽¹⁾	19.0	Yes
3	300	B16.34 & VIII	9.0	67.5	5	1	34.5	12.8	138	Yes	Yes	27.0	29.0	Yes
3	600	B16.34 & VIII	12.2	67.5	10	1	34.5	25.6	138	Yes	Yes	31.8	32.0	Yes
3	900	B16.34 & VIII	17.2	67.5	15	1	43.5	32.3	138	Yes	Yes	38.1	38.5	Yes
3	1500	B16.34 & VIII	28.4	67.5	25	1	49.5	49.1	138	Yes	Yes	47.7	48.0	Yes
3	2500	B16.34 & VIII	50.3	67.5	42	1	69.0	66.3	138	Yes	Yes	66.7	68.0	Yes
4	150	B16.34 & VIII	7.6	87.5	2	1	34.5	6.3	138	Yes	Yes	22.3	24.0	Yes
4	300	B16.34 & VIII	10.3	87.5	5	1	34.5	15.7	138	Yes	Yes	30.2	32.0	Yes
4	600	B16.34 & VIII	14.9	87.5	10	1	35.5	30.6	138	Yes	Yes	38.1	38.1	Yes
4	900	B16.34 & VIII	21.3	87.5	15	1	44.5	38.5	138	Yes	Yes	44.5	44.5	Yes
4	1500	B16.34 & VIII	35.7	87.5	25	1	56.0	54.1	138	Yes	Yes	54.0	54.0	Yes
4	2500	B16.34 & VIII	67.3	92.5	42	1	95.0	66.1	138	Yes	Yes	76.2	76.2	Yes
6	150	B16.34 & VIII	8.8	123	2	1	26.0	10.7	138	Yes	Yes	23.9	26.0	Yes
6	300	B16.34 & VIII	12.7	123	5	1	26.0	26.7	138	Yes	Yes	35.0	37.0	Yes
6	600	B16.34 & VIII	19.7	123	10	1	29.0	48.4	138	Yes	Yes	47.7	48.0	Yes
6	900	B16.34 & VIII	28.7	123	15	1	38.0	57.6	138	Yes	Yes	55.6	56.0	Yes
6	1500	B16.34 & VIII	49.5	128	25	1	55.5	72.7	138	Yes	Yes	82.6	83.0	Yes
6	2500	B16.34 & VIII	91.2	129	42	1	113.0	73.1	138	Yes	Yes	108.0	108.0	Yes
8	150	B16.34 & VIII	9.9	157.6	2	1	23.4	14.7	138	Yes	Yes	27.0	29.0	Yes
8	300	B16.34 & VIII	15	157.6	5	1	23.4	36.7	138	Yes	Yes	39.7	42.0	Yes
8	600	B16.34 & VIII	24.4	157.6	10	1	41.5	44.0	138	Yes	Yes	55.6	56.0	Yes
8	900	B16.34 & VIII	37	162.6	15	1	49.5	58.3	138	Yes	Yes	63.5	63.5	Yes
8	1500	B16.34 & VIII	63.4	163.5	25	1	84.5	63.4	138	Yes	Yes	92.1	92.9	Yes
8	2500	B16.34 & VIII	115	163.6	42	1	133.5	76.7	138	Yes	Yes	127.0	127.0	Yes
10	150	B16.34 & VIII	11.1	194	2	1	40.5	10.8	138	Yes	Yes	28.6	31.0	Yes
10	300	B16.34 & VIII	17.6	195.5	5	1	39.0	28.1	138	Yes	Yes	46.1	48.0	Yes
10	600	B16.34 & VIII	29.8	196	10	1	50.0	45.2	138	Yes	Yes	63.5	64.0	Yes
10	900	B16.34 & VIII	45.4	203	15	1	52.5	67.0	138	Yes	Yes	69.9	70.0	Yes
10	1500	B16.34 & VIII	45.4	203	25	1	74.0	83.6	138	Yes	Yes	108.0	108.0	Yes
12	150	B16.34 & VIII	12.4	231	2	1	33.8	14.9	138	Yes	Yes	30.2	32.0	Yes
12	300	B16.34 & VIII	19.9	231	5	1	33.8	37.2	138	Yes	Yes	49.3	51.0	Yes
12	600	B16.34 & VIII	34.5	231	10	1	49.8	52.4	138	Yes	Yes	66.7	67.0	Yes
12	900	B16.34 & VIII	52.1	237	15	1	60.0	68.3	138	Yes	Yes	79.4	79.5	Yes
12	1500	B16.34 & VIII	91.1	237	25	1	102.0	73.1	138	Yes	Yes	123.9	124.0	Yes
16	150	B16.34 & VIII	14.5	300	2	1	47.3	13.9	138	Yes	Yes	35.0	37.0	Yes
16	300	B16.34 & VIII	24.2	300	5	1	47.3	34.7	138	Yes	Yes	55.6	58.0	Yes
16	600	B16.34 & VIII	43.3	299	10	1	59.0	56.7	138	Yes	Yes	76.2	77.0	Yes
16	900	B16.34 & VIII	65.2	296.5	15	1	81.5	63.6	138	Yes	Yes	88.9	88.9	Yes
16	1500	B16.34 & VIII	113.2	297	25	1	129.5	72.3	138	Yes	Yes	146.1	146.1	Yes
18	150	B16.34 & VIII	15.6	332.5	2	1	54.0	13.5	138	Yes	Yes	38.1	40.0	Yes
18	300	B16.34 & VIII	26.5	332.5	2	1	54.0	13.5	138	Yes	Yes	58.8	61.0	Yes
18	600	B16.34 & VIII	48	332.5	10	1	54.0	67.6	138	Yes	Yes	82.6	83.0	Yes
18	900	B16.34 & VIII	72.5	332.5	15	1	90.0	64.4	138	Yes	Yes	101.6	101.6	Yes
20	150	B16.34 & VIII	16.9	372.5	2	1	45.5	17.6	138	Yes	Yes	41.3	43.0	Yes
20	300	B16.34 & VIII	29.2	372.5	5	1	45.5	43.9	138	Yes	Yes	62.0	64.0	Yes
20	600	B16.34 & VIII	52.7	367.5	10	1	70.5	58.1	138	Yes	Yes	88.9	89.0	Yes
20	900	B16.34 & VIII	80.9	372.5	15	1	88.0	72.5	138	Yes	Yes	108.0	108.0	Yes
24	150	B16.34 & VIII	19.4	449.5	2	1	50.5	19.0	138	Yes	Yes	46.1	48.0	Yes
24	300	B16.34 & VIII	34.1	449.5	5	1	50.5	47.5	138	Yes	Yes	68.3	70.0	Yes
24	600	B16.34 & VIII	63.5	449.5	10	1	79.5	62.5	138	Yes	Yes	101.6	102.0	Yes

Circumferential Hoop Stress ASME VIII

$$S = \frac{PR + 0.6tP}{tE}$$

Notes: (1) ASME B16.34 Valves - Flanged, Threaded, and Welding End, 6.2.2 allows the use of flange thickness of flanged fittings for 150# and 300# valves. These flange thicknesses are from ASME B16.5 Pipe Flanges and Flanged Fittings, Table 9.

THIS IS PART OF
CRN OC179635
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program