To:	TSSA	From:	Janet Townsend
Company:	J Flow Controls	Phone:	416-747-4291
Pages:	17	Location:	Toronto
Our File:	ANR-5520	Date:	October 07, 2019

Your File:2691526

Subject: **Request for Design Registration**

CSA has reviewed the documentation submitted by TSSA on behalf of J Flow Controls These fittings have been registered by CSA for the Province of Québec. In accordance with an agreement between CSA, the Provinces of Québec and Saskatchewan; this registration is recognized by Quebec and Saskatchewan. These fittings are acceptable for use in these Provinces.
The letters CSA will be applied as a prefix to the CRN indicate which fittings have been registered in this manner. A copy of the stamped Statutory Declaration is attached.

The CRN is CSA-0C12248.56R2

A copy of the Statutory Declaration with an original stamp affixed will be forwarded to you along with our invoice by regular mail.

Yours truly

Janet Townsend
Program Manager
CSA Group
178 Rexdale Blvd.
Toronto, ON, M9W 1R3

Régie du bâtiment Québec

REGISTERED CSA GROUP
CRN: CSA-OC12248.56R2
Registration Process administered by CSA Group per CSA B51

Statutory Declaration Registration of Fittings

(a) Design Qualification

I[1] Kenneth S McMurry
Vice President of Sales
(Position eg, president, plant manager, chief eng.)

Of J Flow Controls
(name of company)

Located at 4665 Interstate Drive, Cincinnati, Ohio 45246 USA
(plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Boilers & Pressure Vessels Act:

☑ comply with all the requirements of the ANSI/ASME codes as to their dimensions, material, identification & service for which are required: ASME : B16.34

Or

☐ are not covered by the provisions of the ANSI/ASME codes, and are therefore constructed to comply with _____ code and standard, and are designed to the best current engineering practice, as shown by the supporting test data.

(b) Quality control of Manufacture

I further declare the manufacture of these fittings is controlled by a quality control program which complies with the requirements of ASME B16 34, and has been verified by the following authority or authorized agency ISO 9001:2015

The fittings[2] covered by this declaration, for which I seek registration, are Category C fittings

In support of the application, the following information, calculations and/or test data are attached:
6800, 9600, 9700, DM3(4)L(T)2A00, DM4600, DM4800, KE, KS, 2000, 3500, 4000, DM2500, 2500, DM9900-W, DM9900 Series

Declared before me at Cincinnati

In the of State of Ohio

NOTARIAL SEAL STATE OF OHIO

this 19 day of July AD ~~19~~ 19

MICHAEL J. BERGMANN, Attorney At Law
A (commissioner for oaths)
Notary Public, State of Ohio
My Commission Has No Expiration Date
Section 147.03

Signature of Declarer[3]

For Official Use Only

This application is accepted for registration in Category C in accordance with the Boilers and Pressure Vessels Act and CSA Standard B51.

This registration must be revalidated after ten (10) years from the date of acceptance. Sept · 16 · 2029

Registered Number CRN CSA-OC12248.56R2

For the Chief Inspector A. BANWATT

Date OCTOBER · 07 · 2019

1 ***Three completed copied of Statutory Declaration form together with three copies of Catalogs, drawings of Bulletins illustrating above fittings shall be submitted.***
2 ***All fittings are required to be registered in the name of the Manufacturer.***
3 ***This form shall be completed and signed by the president of highest official in the manufacturing plan where the fitting is produced.***

*Note:
1. See attachment as the scope of registration.
2. This registration covers only the valves in full compliance with ASME B16.34.

CSA GROUP

REGISTERED
CSA GROUP
CRN: CSA-OC12248.56R2
Registration Process administered by CSA Group per CSA B51

Technical Safety Authority of Saskatchewan
2202 2nd Ave.
Regina, SK S4R 1K3
PH: (306)798-7112 Toll Free: (866)530-8599
FAX: (306)787-9273 Toll Free: (866)760-9255
Email: boilerpermits@tsask.ca
Website: www.tsask.ca

Statutory Declaration (Registration of Fittings)

TSK-1008

I. Declaration Information

I, Kenneth S McMurry

Vice President of Sales
(company title, e.g. vice president, plant manager, chief engineer)
(must be in a position of authority in the manufacturing plant where the fitting is produced)

JFLOW controls
The Right Valve • The Right Application • Right now!

of: J Flow Controls
(name of manufacturer)

located at: 4665 Interstate Drive (Plant Address – Apt/Street) Cincinnati, Ohio (City,Prov) 45246 (Postal Code)

do solemnly declare that the fittings listed hereinunder, which are subject to the ***Saskatchewan Boiler and Pressure Vessel Safety Act*** (check one)

- (●) Comply with the requirements of ASME B16.34 (title of recognized North American Standard) which specifies the dimensions, Materials of construction, pressure / temperature ratings and identification marking of the fittings, 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, materials of construction, pressure / temperature ratings and the basis for such ratings, and the marking of the fittings for identification.

I further declare that the manufacturer of these fittings is controlled by a quality control program which has been verified by the following authority, ISO 9001:2015 as being suitable for the manufacturer of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are Category C Fittings

In support of this application, the following information, calculations and / or test data are attached:
6800, 9600, 9700, DM3(4)L(T)2A00, DM4600, DM4800, KE, KS, 2000, 3500, 4000, DM2500, 2500, DM9900-W, DM9900 Series

CSA GROUP

II. Declaration

DECLARED before me at Cincinnati In the State of Ohio
this 3rd day of July, 2019

Michael J. Bergmann (print name)
MICHAEL J. BERGMANN, Attorney At Law
Notary Public, State of Ohio
My Commission Has No Expiration Date
Section 147.03

(Signature)

(Signature of Commissioner of Oaths)

III. Office Use Only

To the best of my knowledge and belief, the application meets the requirements of the ***Boiler and Pressure Vessel Safety Act*** and CSA B51, clause 4.2, and is accepted for registration in Category C

CSA-OC12248.56R2 (Registration Number)
OCT·07·2019 (Date Registered – MM DD YYYY)
Sept·16·2029 (Expiry Date – MM DD YYYY)
(For the Administrator – Chief Inspector) A. BANWATT

CSA GROUP

CSA GROUP

*Note:
1. See attachment as the scope of registration.
2. This registration covers only the valves in full compliance with ASME B16.34.

345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel: 416 734 3300
Fax: 416 231 1626
Toll Free: 1 877 682.8772

www.tssa.org

September25, 2019

STEVE HACKER
J-FLOW CONTROLS LLC
4665 INTERSTATE DR
CINCINNATI OH 45246
US

Service Request Type: BPV-Fitting Registration
Service Request No.: 2639208
Your Reference No.:
Registered to: J-FLOW CONTROLS LLC

Dear STEVE HACKER,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission has been reviewed and registered as follows:

CRN: **0C12248.5R2**
Main Design No.: VALVES 6800, 9600, 9700, DM3(4)L(T)2A00, DM4800, KE, KS , 2000, 3500, 4000, DM2500, 2500, DM9900-W, DM9900 SERIES
Expiry Date: 25-Sep-2029

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

Note: Product renewal registration include series DM4(4)L(T)2A00, KS, 9700, 4000, 3500, 2000, DM2500, KE, DM4600, DM4800, 6800, 9600, DM9900. See 'part of CRN' documents for details.

A stamped copy of the approved registration and invoice for engineering services will be mailed to you shortly. Should you have any questions or require further assistance, however, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail customerservices@tssa.org. We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Alan Wu P. Eng.
Mechanical Engineer, BPV
Tel. : 416-734-3443
Fax : 416-231-6183
Email : awu@tssa.org

CSA GROUP 1 OF 13

ATTACHMENT TO
CRN: CSA-0C12248.5R2
Signed:
...dale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW CONTROLS

Report of Ball Valve Design And Test

THIS IS PART OF CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

1. Type：DM3T/3L2A00 Full port
2. Material：Body and end cap CF8M
3. Body and end cap design(1/4"~5" Class 300)
   - 3.1 Casting method：Investment casting
   - 3.2 Wall thickness：Valve body Minimum wall thickness：Reference ASTM/ANSI B16.34 Table 3

BODY MATL: A351 CF8M
A216 WCB

NPS	Pressure Rating Class	ASTM/ANSI B16.34 Table 3 Minimum wall thickness	Produce wall thickness	Check
1/4"	CLASS 300	0.13 inch	0.294 inch	OK
3/8"	CLASS 300	0.13 inch	0.294 inch	OK
1/2"	CLASS 300	0.14 inch	0.345 inch	OK
3/4"	CLASS 300	0.15 inch	0.304 inch	OK
1"	CLASS 300	0.17 inch	0.221 inch	OK
1-1/4"	CLASS 300	0.19 inch	0.243 inch	OK
1-1/2"	CLASS 300	0.20 inch	0.231 inch	OK
2"	CLASS 300	0.24 inch	0.284 inch	OK
2-1/2"	CLASS 300	0.26 inch	0.276 inch	OK
3"	CLASS 300	0.28 inch	0.304 inch	OK
4"	CLASS 300	0.30 inch	0.335 inch	OK
5"	CLASS 300	0.34 inch	0.355 inch	OK

4. Socket welding and Threaded ends Wall Minimum thickness：Reference ASME B16.34 Table 4

Size NPS	Wall Thickness C, in. Pressure Rating 300		Check
	ASME B16.34 Table 4 Wall Thickness	Produce Wall Thickness	
1/4"	0.12 inch	0.173 inch	OK
3/8"	0.12 inch	0.126 inch	OK
1/2"	0.13 inch	0.138 inch	OK
3/4"	0.14 inch	0.150 inch	OK
1"	0.15 inch	0.157 inch	OK
1-1/4"	0.15 inch	0.185 inch	OK
1-1/2"	0.16 inch	0.185 inch	OK
2"	0.18 inch	0.215 inch	OK
2-1/2"	0.22 inch	0.258 inch	OK

CSA GROUP

ATTACHMENT TO
C.R.N. CSA-0C12248.6R2
Signed:
1 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW® CONTROLS

Report of Ball Valve Design And Test

1. Type：DM3T/3L2A00 Full port
2. Material：Body and end cap CF8M
3. Body and end cap design(6"~10" Class 150)
   - 3.1 Casting method：Sand Casting
   - 3.2 Wall thickness：Valve body Minimum wall thickness：Reference ASTM/ANSI B16.34 Table 3

N P S	Pressure Rating Class	ASTM/ANSI B16.34 Table 3 Minimum wall thickness	Produce wall thickness	Check
6"	CLASS 150	0.30 inch	0.371 inch	OK
8"	CLASS 150	0.31 inch	0.365 inch	OK
10"	CLASS 150	0.35 inch	0.533 inch	OK

THIS IS PART OF
CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

4. Bolted Body Joints.

Calculation to ASME B16.34,6.4.2.1

$$P_c \frac{A_g}{A_b} \leq K_2 S_a \leq 7000$$

BODY MAT'L: A351 CF8M, A216 WCB

S_a：allowable bolt stress at 38°C (100°F), MPa (psi).When greater than 137.9MPa (20,000 psi), use137.9 MPa (20,000 psi).

P_c：pressure rating class designation (see Non mandatory Appendix B, para. B-1.3)

A_g：area bounded by the effective outside periphery of a gasket or O-ring or other seal-effective periphery, except that in the case of a ring joint the bounded area is defined by the pitch diameter of the ring.

A_b：total effective bolt tensile stress area

K_2：0.35/psi when S_a is expressed in psi units

N P S	Pressure Rating Class (PC)	Blots Quantity	Blots Material	Blots Dim.	Ab (I N²)	Ag (I N²)	PC $\frac{Ag}{Ab} \leq 7000$	Check
6"	CLASS 150	8	304	1/2"	1.136	41.184	5439<7000	OK
8"	CLASS 150	8	304	5/8"	1.805	65.49	5442<7000	OK
10"	CLASS 150	10	304	5/8"	2.256	104.457	6945<7000	OK

3 OF 13

CSA GROUP

ATTACHMENT TO
C.R.N. CSA-0C12248.5R2
Signed:
exdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW® CONTROLS

Report of slab gate valve design and test

1. Type: RDP Flanged ends

2. Material: Body and end cap A216 WCB

3. Body and end cap design (2"~12", Class 150~600)

   3.1 Casting method: Investment casting / Sand casting

   3.2 Valve body Minimum wall thickness: Reference ASME B16.34 Table 3-A

THIS IS PART OF
CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

Size	Pressure Rating	ASME B16.34 Table 3-A Minimum wall thickness	Actual minimum wall thickness	Check
2"	CL150	5.5mm	10mm	OK
2-1/2"		5.8mm	10mm	OK
3"		6.0mm	11mm	OK
4"		6.5mm	12mm	OK
6"		7.1mm	12mm	OK
8"		8.1mm	12mm	OK
10"		8.9mm	12mm	OK
12"		9.8mm	12mm	OK
2"	CL300	6.3mm	10mm	OK
2-1/2"		6.8mm	10mm	OK
3"		7.1mm	11mm	OK
4"		7.8m	12mm	OK
6"		9.3mm	14mm	OK
8"		11.3mm	17mm	OK
10"		13.0mm	17mm	OK
12"		14.7mm	19mm	OK
2"	CL600	6.3mm	14mm	OK
2-1/2"		6.9mm	14mm	OK
3"		7.6mm	16mm	OK
4"		9.3mm	19mm	OK
6"		12.7mm	28mm	OK
8"		16.8mm	25mm	OK
10"		20.2mm	29mm	OK
12"		23.5mm	32mm	OK

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CSA GROUP

ATTACHMENT TO
CRN CSA 0C12248.16R2
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW CONTROLS

Report of trunnion mounted ball valve design and test

1. Type: TB1 Flanged ends

2. Material: Body and end cap A216 WCB

3. Body and end cap design (2"~12", Class 150~600)

   3.1 Casting method: Investment casting / Sand casting

   3.2 Valve body Minimum wall thickness: Reference ASME B16.34 Table 3-A FULL BORE ONLY

THIS IS PART OF
CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

NPS	Pressure Rating	ASME B16.34 Table 3-A Minimum wall thickness	Actual minimum wall thickness	Check
2	CL150	5.5mm	6.5mm	ok
3		6.1mm	7mm	ok
4		6.4mm	8mm	ok
6		6.5mm	9mm	ok
8		8.1mm	10mm	ok
10		8.9mm	10.5mm	ok
12		9.8mm	11mm	ok
2	CL300	6.3mm	6.5mm	ok
3		7.1mm	8mm	ok
4		7.8mm	10mm	ok
6		9.7mm	12mm	ok
8		11.3mm	14mm	ok
10		13.0mm	14.5mm	ok
12		14.7mm	16mm	ok
2	CL600	6.3mm	8mm	ok
3		8.0mm	10mm	ok
4		9.3mm	12mm	ok
6		13.4mm	16mm	ok
8		16.8mm	20mm	ok
10		20.2mm	23mm	ok
12		23.5mm	27mm	ok

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CSA GROUP

ATTACHMENT TO
C.R.N: CSA-0C12248.5R2
Signed:
[illegible] Rexdale Boulevard, Toronto, ON Canada M9W 1R3

4. Bolted Body Joints

JFLOW® CONTROLS

Report of globe control valve design and test

THIS IS PART OF CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels Safety Program

1. Type: GP/GM Flanged ends

2. Material: Body and end cap A216 WCB

3. Body and end cap design (1/2"~12", Class 150~600)

REPORT FOR SERIES 2000, 3500, 4000
BODY MATL: A216 WCB, A351 CF8M

3.1 Casting method: Investment casting / sand casting

3.2 Valve body Minimum wall thickness: Reference ASME B16.34 Table 3-A

Size	Pressure Rating	ASME B16.34 Table 3-A Minimum wall thickness	Actual minimum wall thickness	Check
0.5"	CL150	3.1mm	6mm	ok
0.75"		3.5mm	6mm	ok
1"		3.9mm	6mm	ok
1.5"		4.9mm	6mm	ok
2"		5.5mm	7mm	ok
3"		6.1 mm	8 mm	ok
4"		6.5mm	8mm	ok
6"		7.1mm	9.5mm	ok
8"		8.0mm	10.5mm	ok
10"		8.8mm	11mm	ok
12"		9.6mm	11.5mm	ok
0.5"	CL300	3.3mm	6.5mm	ok
0.75"		3.7mm	6.5mm	ok
1"		4.3mm	6.5mm	ok
1.5"		5.5mm	7mm	ok
2"		6.3mm	7.5mm	ok
3"		7.2mm	8.5 mm	ok
4"		7.8mm	9.5mm	ok
6"		9.3mm	10.5mm	ok
8"		11.0mm	11.5mm	ok
10"		12.7mm	13mm	ok
12"		14.3mm	15mm	ok

6 OF 3

CSA GROUP

ATTACHMENT TO
C.R.N: CSA-0C12248.5R2
Signed:
128 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW® CONTROLS

Report of Ball Valve Design And Test

BODY MAT'L: A351 CF8M
A216 WCB

THIS IS PART OF
CRN 0C12248.5RZ
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

1. Type : DM2500 Flanges
2. Material : Body and end cap CF8M
3. Body and end cap design(1/2"~4" Class 150)
   - 3.1 Casting method : Investment casting
   - 3.2 Wall : Valve body Minimum wall thickness : Reference ASME B16.34 Table 3B

N P S	Pressure Rating Class	ASME B16.34 Table 3B Minimum wall thickness	Produce wall thickness	Check
1/2"	CLASS 150	0.13 inch	0.158 inch	OK
3/4"	CLASS 150	0.14 inch	0.166 inch	OK
1"	CLASS 150	0.16 inch	0.178 inch	OK
1-1/4"	CLASS 150	0.17 inch	0.197 inch	OK
1-1/2"	CLASS 150	0.19 inch	0.205 inch	OK
2"	CLASS 150	0.22 inch	0.229 inch	OK
2-1/2"	CLASS 150	0.23 inch	0.233 inch	OK
3"	CLASS 150	0.24 inch	0.257 inch	OK
4"	CLASS 150	0.26 inch	0.288 inch	OK

4. Bolted Body Joints.

   Calculation to ASME B16.34,6.4.2.1

$$P_c \frac{A_g}{A_b} \leq K_2 S_a \leq 7000$$

S_a : allowable bolt stress at 38°C (100°F), MPa (psi).When greater than 137.9MPa (20,000 psi), use137.9 MPa (20,000 psi).

P_c : pressure rating class designation (see Nonmandatory Appendix B, para. B-1.3)

A_g : area bounded by the effective outside periphery of a gasket or O-ring or other seal-effective periphery, except that in the case of a ringjoint the bounded area is defined by the pitch diameter of the ring.

A_b : total effective thread shear area

K_2 : 0.35/psi when Sa is expressed in psi units

7 OF 13

CSA GROUP

ATTACHMENT TO
CRN: CSA-0C12248.16R2
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW® CONTROLS

Report of double expanding gate valve design and test

1. Type: RDD Flanged ends

2. Material: Body and end cap A216 WCB

3. Body and end cap design (2"~12", Class 150~600)

   3.1 Casting method: Investment casting / Sand casting

   3.2 Valve body Minimum wall thickness: Reference ASME B16.34 Table 3-A

THIS IS PART OF CRN 0C12278.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

Size	Pressure Rating	ASME B16.34 Table 3-A Minimum wall thickness	Actual minimum wall thickness	Check
2"	CL150	5.5mm	8mm	OK
2-1/2"		5.8mm	9mm	OK
3"		6.0mm	9mm	OK
4"		6.5mm	10mm	OK
6"		7.1mm	10mm	OK
8"		8.1mm	11mm	OK
10"		8.9mm	12mm	OK
12"		9.8mm	14mm	OK
2"	CL300	6.3mm	10mm	OK
2-1/2"		6.8mm	11mm	OK
3"		7.1mm	12mm	OK
4"		7.8m	14mm	OK
6"		9.3mm	15mm	OK
8"		11.3mm	17mm	OK
10"		13.0mm	18mm	OK
12"		14.7mm	21mm	OK
2"	CL600	6.3mm	14mm	OK
2-1/2"		6.9mm	15mm	OK
3"		7.6mm	18mm	OK
4"		9.3mm	19mm	OK
6"		12.7mm	24mm	OK
8"		16.8mm	26mm	OK
10"		20.2mm	32mm	OK
12"		23.5mm	35mm	OK

CSA GROUP 8973

ATTACHMENT TO
CRN: CSA-0C12278.5R2
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW® CONTROLS

Report of floating ball valve design and test

1. Type: FB1 Flanged ends

2. Material: Body and end cap A216 WCB

3. Body and end cap design (1/2"~8", Class 150 and 300)

   3.1 Casting method: Investment casting

   3.2 Valve body Minimum wall thickness: Reference ASME B16.34 Table 3-A

THIS IS PART OF CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels Safety Program

NPS	Pressure Rating	ASME B16.34 Table 3-A Minimum wall thickness	Actual minimum wall thickness	Check
0.5	CL150	3.1mm	4.2mm	ok
0.75		3.5mm	4mm	ok
1		3.9mm	5mm	ok
1.5		4.9mm	6.0mm	ok
2		5.5mm	6.5mm	ok
2.5		5.8mm	7mm	ok
3		6.0mm	6.1mm	ok
4		6.5mm	8mm	ok
5		6.8mm	9mm	ok
6		7.1mm	9mm	ok
8		8.1mm	10mm	ok
0.5	CL300	3.3mm	3.5mm	ok
0.75		3.7mm	5mm	ok
1		4.3mm	6mm	ok
1.5		5.5mm	7mm	ok
2		6.3mm	8mm	ok
2.5		6.8mm	8mm	ok
3		7.1mm	8.1mm	ok
4		7.8mm	10mm	ok
5		8.7mm	11mm	ok
6		9.3mm	12mm	ok
8		11.3mm	14mm	ok

9 of 13

CSA GROUP

ATTACHMENT TO
C R N: CSA-0C12248.5R2
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW® CONTROLS

Report of Ball Valve Design And Test

THIS IS PART OF CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

1. Type：DM9900 Full port
2. Material：Body and end cap CF8M
3. Body and end cap design(1-1/2"~6" Class 600)
   - 3.1 Casting method：Investment casting / Sand Casting
   - 3.2 Wall thickness：Valve body Minimum wall thickness：Reference ASTM/ANSI B16.34 Table 3

BODY MATERIAL: A351 CF8M
A216 WCB

N P S	Pressure Rating Class	ASTM/ANSI B16.34 Table 3 Minimum wall thickness	Produce wall thickness	Check
1-1/2"	CLASS 600	0.22 inch	0.256 inch	OK
2"	CLASS 600	0.24 inch	0.295 inch	OK
3"	CLASS 600	0.32 inch	0.327 inch	OK
4"	CLASS 600	0.38 inch	0.421 inch	OK
6"	CLASS 600	0.51 inch	0.539 inch	OK

4. Body joints：wafer & flange

5. Pressure Test：1-1/2"~6" Class600
   According to ASME B16.34,7.1&7.2

N P S	Hydraulic Test		Air Test (psi)	Check
	Shell Test (psi)	Seat Test (psi)		
1-1/2"~6"	2225	1650	80	OK

10 OF 13

CSA GROUP

ATTACHMENT TO
C.R.N: CSA-0C12248.5R2
Signed:
178 Rexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW® CONTROLS

Report of Ball Valve Design And Test

THIS IS PART OF CRN 0C12248.5R2
Technical Standards & Safety Authority
Boilers & Pressure Vessels Safety Program

1. Type : DM4600 Full port
2. Material : Body and end cap CF8M
3. Body and end cap design(1/2"~4" Class 600)
   - 3.1 Casting method : Investment casting
   - 3.2 Wall thickness : Valve body Minimum wall thickness : Reference ASTM/ANSI B16.34 Table 3

BODY MAT'L: A216 WCB
A351 CF8M

NPS	Pressure Rating Class	ASTM/ANSI B16.34 Table 3 Minimum wall thickness	Produce wall thickness	Check	Dwg
1/2"	CLASS 600	0.15 inch	0.296 inch	OK	0.25
3/4"	CLASS 600	0.17 inch	0.284 inch	OK	0.37
1"	CLASS 600	0.19 inch	0.324 inch	OK	0.295
1-1/4"	CLASS 600	0.20 inch	0.280 inch	OK	
1-1/2"	CLASS 600	0.22 inch	0.304 inch	OK	
2"	CLASS 600	0.24 inch	0.391 inch	OK	
2-1/2"	CLASS 600	0.28 inch	0.371 inch	OK	
3"	CLASS 600	0.32 inch	0.418 inch	OK	
4"	CLASS 600	0.38 inch	0.513 inch	OK	

4. Socket welding and Threaded ends Wall Minimum thickness : Reference ASME B16.34 Table 4

Size NPS	Wall Thickness C, in. Pressure Rating 600		Check
	ASME B16.34 Table 4 Wall Thickness	Produce Wall Thickness	
1/4"	0.13 inch	0.232 inch	OK
3/8"	0.14 inch	0.167 inch	OK
1/2"	0.16 inch	0.185 inch	OK
3/4"	0.17 inch	0.197 inch	OK
1"	0.20 inch	0.226 inch	OK
1-1/4"	0.21 inch	0.226 inch	OK
1-1/2"	0.22 inch	0.250 inch	OK
2"	0.24 inch	0.333 inch	OK
2-1/2"	0.30 inch	0.394 inch	OK

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CSA GROUP

ATTACHMENT TO
C.R.N: CSA-0C12248.5R2
Signed:
8 Hexdale Boulevard, Toronto, ON Canada M9W 1R3

JFLOW CONTROLS

Report of Ball Valve Design And Test

1. Type：DM4800 Full port
2. Material：Body and end cap CF8M
3. Body and end cap design (1/2"~3" Class 900)
   - 3.1 Casting method：Investment casting
   - 3.2 Wall thickness：Valve body Minimum wall thickness：Reference ASTM/ANSI B16.34 Table 3

N P S	Pressure Rating Class	ASTM/ANSI B16.34 Table 3 Minimum wall thickness	Produce wall thickness	Check
1/2"	CLASS 900	0.25 inch	0.295 inch	OK
3/4"	CLASS 900	0.27 inch	0.283 inch	OK
1"	CLASS 900	0.29 inch	0.323 inch	OK
1-1/4"	CLASS 900	0.31 inch	0.343 inch	OK
1-1/2"	CLASS 900	0.36 inch	0.413 inch	OK
2"	CLASS 900	0.43 inch	0.472 inch	OK
21/2"	CLASS 900	0.42 inch	0.531 inch	OK
3"	CLASS 900	0.60 inch	0.604 inch	OK

4. Socket welding and Threaded ends Wall Minimum thickness：Reference ASME B16.34 Table 4

Size N P S	Wall Thickness C, in. Pressure Rating 900		Check
	ASME B16.34 Table 4 Wall Thickness	Produce Wall Thickness	
1/2"	0.21 inch	0.295 inch	OK
3/4"	0.24 inch	0.283 inch	OK
1"	0.27 inch	0.323 inch	OK
1-1/4"	0.28 inch	0.343 inch	OK
1-1/2"	0.31 inch	0.413 inch	OK
2"	0.36 inch	0.472 inch	OK
2-1/2"	0.41 inch	0.51 inch	OK

Report of Ball Valve Design And Test

1. Type：6800 Full port
2. Material：Body and end cap CF8M
3. Body and end cap design(1/4"~3" Class 150)
   3.1 Casting method：Investment casting
   Wall thickness：Valve body Minimum wall thickness：Reference ASTM/ANSI B16.34 Table 3

NPS	Pressure Rating Class	ASTM/ANSI B16.34 Table 3 Minimum wall thickness	Produce wall thickness	Check
1/4"	CLASS 150	0.12 inch	0.122 inch	OK
3/8"	CLASS 150	0.12 inch	0.122 inch	OK
1/2"	CLASS 150	0.13 inch	0.13 inch	OK
3/4"	CLASS 150	0.14 inch	0.15 inch	OK
1"	CLASS 150	0.20 inch	0.205 inch	OK
11/4"	CLASS 150	0.20 inch	0.213 inch	OK
11/2"	CLASS 150	0.21 inch	0.225 inch	OK
2"	CLASS 150	0.22 inch	0.237 inch	OK
21/2"	CLASS 150	0.23 inch	0.257 inch	OK
3"	CLASS 150	0.24 inch	0.296 inch	OK

4. Socket welding and Threaded ends Wall Minimum thickness：Reference ASME B16.34 Table 4

Size NPS	Wall Thickness C, in. Pressure Rating 150		Check
	ASME B16.34 Table 4 Wall Thickness	Produce Wall Thickness	
1/4"	0.12 inch	0.165 inch	OK
3/8"	0.12 inch	0.165 inch	OK
1/2"	0.13 inch	0.13 inch	OK
3/4"	0.14 inch	0.141 inch	OK
1"	0.15 inch	0.157 inch	OK
1-1/4"	0.15 inch	0.157 inch	OK
1-1/2"	0.16 inch	0.177 inch	OK
2"	0.18 inch	0.204 inch	OK
2-1/2"	0.22 inch	0.270 inch	OK

5. Threaded Body Joints.

EAGLE Registrations Inc.
SERVICE • INTEGRITY • VALUE

ANAB ACCREDITED
ISO/IEC 17021
MANAGEMENT SYSTEMS CERTIFICATION BODY

Certificate No. 4581 (Recertified July 1, 2018 - 2 Copies)
July 1, 2018 through June 30, 2021

Certificate of Registration

This is to certify that the Quality Management System of

Advanced Control Products/J Flow Controls

4665 Interstate Drive, Cincinnati, Ohio 45246 USA

Has been assessed by **EAGLE Registrations Inc.** and conforms to the following standard:

ISO 9001:2015

Scope of Registration

Manufacture and Distribution of Valves and Valve Assemblies

Chief Administrative Officer

March 2019

CRN – Canadian Registration Numbers – Saskatchewan

The Province of Saskatchewan participates with Quebec and the Canadian Standards Association (CSA Group) for the registrations of “Fittings”.

Per an agreement with CSA Group in April 1998, Saskatchewan recognizes registrations done by CSA Group and accepts such fittings for use in Saskatchewan.

The letters “CSA” are applied as a prefix to the CRN to indicate which “Fittings” have been registered in this manner. You should inform your clients of this additional marking requirement and that “Fittings” registered by CSA Group are accepted for use in province of Saskatchewan, Canada.

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