



**THE NATIONAL BOARD**  
OF BOILER AND PRESSURE VESSEL INSPECTORS

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December 4, 2018

Louie Luna  
F. C. Kingston Company  
23201 Normandie Avenue  
Torrance, CA 90501

**Subject: Capacity Certification, Valve Type: Fig. 118C & 119 (.578" Orif.)  
NB Cap Cert. No.: KNG-M35109**

Dear Mr. Luna:

We have reviewed the enclosed test results, referenced below, which were performed at the **National Board Testing Laboratory** on November 28, 2018 for the purpose of testing for capacity certification of the subject valve type as required by paragraph UG-136(c)(3) of Section VIII of the ASME Code.

**F. C. Kingston Company** is hereby granted capacity certification and authorization to apply the "NB" mark and ASME Certification mark with "UV" designator to the valve type listed in the scope of certification. This authorization is valid only for the above location and only while the organization is fully implementing its quality control system as accepted by the National Board.

**SCOPE OF CERTIFICATION**

**Valve Type: Fig. 118C & 119 (.578" Orif.)**

**Organization Type: Manufacturer**

**Certified Rating Value/Sizes/Pressure Ranges: As listed in the NB-18**

**Certification Expiration Date: April 13, 2025**

Sincerely,

Thomas P. Beirne, P.E.  
Technical Manager, Pressure Relief Dept.

REFERENCING TEST NUMBERS: 48682A, 48683A

File:GF: 181204 KNG-M35109 Pass

# National Board Testing Laboratory

## Nitrogen Test - Orifice Plate Flow Meter Method

Valve ID Data		Revision 2.4	
1	Test Number	<b>48682A</b>	
2	Test Sponsor	<b>F. C. Kingston Company</b>	
3	Company Type	Manufacturer	Torrance, CA
4	Test Date	11/30/2018	KNG
5	Valve Type	118CSS	
6	Manufacturer	<b>F. C. Kingston Company</b>	
7	Cap. Cert. ID No.	35104	
8	Set Pressure	100 psig	
9	Inlet Size	1 M	
10	Outlet Size	Side	
11	Stamped Capacity	458. SCFM	
12	Code Section	VIII	
13	Serial Number	1	
14	Date Code	0918	
Operational Data and Measured Dimensions			
15	Warn Pressure		psig
16	Set Pressure	98.8	psig
17	Reset Set Pressure		psig
18	Blowdown	19.3	psi
19	Reset Blowdown		psi
20	Bore Diameter	0.581	inch
21	Lift		inch
Measured Data			
22	Flow Area	0.26512	in <sup>2</sup>
23	Line Pressure	111.7	psig
24	Differential Pressure	3.33	psid
25	Line Temp.	56	°F
26	Vessel Pressure	108.7	psig
27	Vessel Temp.	73	°F
28	P <sub>b</sub>	14.25	psia
29	Plate ID Number	2A	1.15 Plate Dia.
Calculated Data			
	Line Pressure (absolute)	125.947	psia
32	Density @ Flow Condition <sub>(w)</sub>	0.6387	lbm/ft <sup>3</sup>
33	Area Factor <sub>(Fa)</sub>	0.999812	
34	Trial Flow Rate	0.6049	lbm/sec
35	Viscosity	1.1582E-05	lbm/ft-sec
36	Reynolds Number RD	220,214	
37	Theoretical Capacity <sub>(WT)</sub>		
	WT=CKAP√M/T	2,660.0	lbm/hr N2
38	Measured Capacity at Std. Cond.	2,177.8	lbm/hr N2
39	<b>Measured Capacity at Std. Cond.</b>	<b>483.4</b>	SCFM AIR
40	Slope	<b>3.932</b>	SCFM/PSIA
41	Coefficient	0.81870	
42	Rated Capacity For Measured Set	451.2	SCFM
43	Rated Slope	3.67	
44			

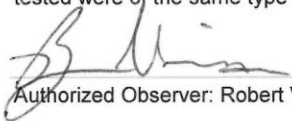
# National Board Testing Laboratory

## Air Test - Orifice Plate Method: Test Summary

### Test Summary for test 48682A:

1. Valve tested for 6 Year Capacity Recertification as a Manufacturer.

I certify that the data on the attached test data sheets was obtained under my supervision in accordance with the provisions of ASME PTC 25, the applicable sections of the ASME Boiler and Pressure Vessel Code, and the National Board Testing Laboratory Quality Control Manual. To the best of my knowledge and belief the objects tested were of the same type and design as indicated.

  
Authorized Observer: Robert Viers

11-30-18  
Date

Test Personnel

Company Representatives

Tim Brown  
Robert Viers

# National Board Testing Laboratory

## Nitrogen Test - Orifice Plate Flow Meter Method

Valve ID Data		Revision 2.4	
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2	Test Sponsor	<b>F. C. Kingston Company</b>	
3	Company Type	Manufacturer	Torrance, CA
4	Test Date	11/30/2018	KNG
5	Valve Type	118CSS	
6	Manufacturer	<b>F. C. Kingston Company</b>	
7	Cap. Cert. ID No.	35104	
8	Set Pressure	200 psig	
9	Inlet Size	1 M	
10	Outlet Size	Side	
11	Stamped Capacity	861. SCFM	
12	Code Section	VIII	
13	Serial Number	4	
14	Date Code	0918	
Operational Data and Measured Dimensions			
15	Warn Pressure		psig
16	Set Pressure	196.8	psig
17	Reset Set Pressure		psig
18	Blowdown	43.4	psi
19	Reset Blowdown		psi
20	Bore Diameter	0.580	inch
21	Lift		inch
Measured Data			
22	Flow Area	0.26421	in <sup>2</sup>
23	Line Pressure	221.8	psig
24	Differential Pressure	6.04	psid
25	Line Temp.	52	°F
26	Vessel Pressure	216.4	psig
27	Vessel Temp.	71	°F
28	P <sub>b</sub>	14.24	psia
29	Plate ID Number	2A	1.15 Plate Dia.
Calculated Data			
	Line Pressure (absolute)	236.043	psia
32	Density @ Flow Condition <sub>(w)</sub>	1.2092	lbm/ft <sup>3</sup>
33	Area Factor <sub>(Fa)</sub>	0.999747	
34	Trial Flow Rate	1.1208	lbm/sec
35	Viscosity	1.1509E-05	lbm/ft-sec
36	Reynolds Number RD	410,599	
37	Theoretical Capacity <sub>(WT)</sub>		
	WT=CKAP√M/T	4,984.2	lbm/hr N2
38	Measured Capacity at Std. Cond.	4,035.0	lbm/hr N2
39	<b>Measured Capacity at Std. Cond.</b>	<b>895.7</b>	SCFM AIR
40	Slope	<b>3.883</b>	SCFM/PSIA
41	Coefficient	0.80956	
42	Rated Capacity For Measured Set	846.5	SCFM
43	Rated Slope	3.67	
44			

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