



**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: 710D A, 710D G, 710D P**  
**NB Cap Cert. No.: KNG-M35154**

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: 710D A, 710D G, 710D P**

**Organization Type: Manufacturer**

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

**Certification Expiration Date: February 28, 2025**

Sincerely,

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

REFERENCING TEST NUMBERS: 48666S, 48681A

File:GF: 181204 KNG-M35154 Pass

# National Board Testing Laboratory

## Steam Test - Timed Weight Method

Valve ID Data		Revision 4	apps\Labview Programs\DATA\Steam Tests\48666S.xls
1	Test Number	<b>48666S</b>	
2	Test Sponsor	<b>F. C. Kingston Company</b>	
3	Company Type	Manufacturer	Torrance, CA
4	Test Date	11/28/2018	KNG
5	Valve Type	710D45S1L1-037	
6	Manufacturer	F. C. Kingston Company	
7	Cap. Cert. ID No.	35154	
8	Set Pressure	37 psig	
9	Inlet Size	1/2 M	
10	Outlet Size	3/4 F	
11	Stamped Capacity	328. PPH	
12	Code Section	VIII	
13	Serial Number	7	
14	Date Code	11/12/18	
Operational Data and Measured Dimensions			
15	Warn Pressure		psig
16	Set Pressure	38.3	psig
17	Reset Set Pressure		psig
18	Blowdown	7.8	psi
19	Reset Blowdown		psi
20	Bore Diameter	0.428	inch
21	Lift		inch
Measured Data			
22	Flow Area	0.14387	in <sup>2</sup>
23	Vessel Pressure	41.9	psig
24	P <sub>b</sub>	14.29	psia
25	Calorimeter Temp.	249.9	°F
26	Time of Run	4.0	minutes
27	Weight	26.8	lbm
28	Leakage		PPH
Calculated Data			
29			
30	Vessel Pressure	56.2	psia
31	Enthalpy, calorimeter	1,168.9	BTU/lbm
32	Saturation Temp., Vessel	288.4	°F
33	Saturation Volume, Vessel	7.6330	ft <sup>3</sup> /lbm
34	Steam Quality, Vessel	99.2	%
35	Vessel Temp. (Theoretical)	288.4	°F
36	Vessel Volume	7.5698	ft <sup>3</sup> /lbm
37	Degrees Superheat	N/A	°F
38	Capacity Correction	0.9959	
39	<b>Measured Capacity</b>	<b>400.3</b>	PPH
40	Slope	<b>7.125</b>	PPH/PSIA
41	Coefficient	0.96160	
42	Rated Capacity For Measured Set	347.2	PPH
43	Rated Slope	6.18	
44			in <sup>2</sup>

# National Board Testing Laboratory

## Steam Test - Timed Weight Method: Test Summary

Test Summary for test 48666S:

V:\apps\Labview Programs\DATA\Steam Tests\S.xls

1. Valve tested for 6 Year Capacity Recertification as a Manufacturer.
2. Nameplate capacity should be stamped ~ 342 PPH

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

11-28-18  
Date

Test Personnel

Company Representatives

Robert Viers  
Steve Bowman

# National Board Testing Laboratory

## Nitrogen Test - Orifice Plate Flow Meter Method

Valve ID Data		Revision 2.4	
1	Test Number	<b>48681A</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	710D66S11C1150	
6	Manufacturer	<b>F. C. Kingston Company</b>	
7	Cap. Cert. ID No.	35154	
8	Set Pressure	150 psig	
9	Inlet Size	1 M	
10	Outlet Size	1 F	
11	Stamped Capacity	395. SCFM	
12	Code Section	VIII	
13	Serial Number	10	
14	Date Code	11/16/18	
Operational Data and Measured Dimensions			
15	Warn Pressure		psig
16	Set Pressure	149.0	psig
17	Reset Set Pressure		psig
18	Blowdown	30.8	psi
19	Reset Blowdown		psi
20	Bore Diameter	0.416	inch
21	Lift		inch
Measured Data			
22	Flow Area	0.13592	in <sup>2</sup>
23	Line Pressure	171.2	psig
24	Differential Pressure	7.76	psid
25	Line Temp.	58	°F
26	Vessel Pressure	163.9	psig
27	Vessel Temp.	74	°F
28	P <sub>b</sub>	14.25	psia
29	Plate ID Number	1A	0.8 Plate Dia.
Calculated Data			
	Line Pressure (absolute)	185.445	psia
32	Density @ Flow Condition <sub>(w)</sub>	0.9368	lbm/ft <sup>3</sup>
33	Area Factor <sub>(Fa)</sub>	0.999850	
34	Trial Flow Rate	0.5351	lbm/sec
35	Viscosity	1.1623E-05	lbm/ft-sec
36	Reynolds Number RD	194,097	
37	Theoretical Capacity <sub>(WT)</sub>		
	WT=CKAP√M/T	1,973.7	lbm/hr N2
38	Measured Capacity at Std. Cond.	1,926.4	lbm/hr N2
39	<b>Measured Capacity at Std. Cond.</b>	<b>427.6</b>	<b>SCFM AIR</b>
40	Slope	<b>2.400</b>	<b>SCFM/PSIA</b>
41	Coefficient	0.97602	
42	Rated Capacity For Measured Set	391.9	SCFM
43	Rated Slope	2.2	
44			

# National Board Testing Laboratory

## Air Test - Orifice Plate Method: Test Summary

Test Summary for test 48681A:

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