



THE NATIONAL BOARD

OF BOILER AND PRESSURE VESSEL INSPECTORS

November 16, 2017

Zachary Berggren
Engineered Controls International, LLC
100 Rego Drive
Elon, NC 27244

**Subject: Capacity Certification, Valve Type: PRV19430, PRV29430 (Low Pressure)
NB Cap Cert. No.: REG-M46415**

Dear Mr. Berggren:

We have reviewed the enclosed test results, referenced below, which were performed at the **National Board Testing Laboratory** on November 14, 2017 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.

Engineered Controls International, LLC 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: PRV19430, PRV29430 (Low Pressure)

Organization Type: Manufacturer

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

Certification Expiration Date: November 14, 2023

Sincerely,

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

REFERENCING TEST NUMBERS: 45766A, 45765A

File:GF: 171116 REG-M46415 Pass

National Board Testing Laboratory

Nitrogen Test - Sonic Flow Method

Valve ID Data		Revision 3.8	V:\apps\Labview Programs\DATA\Air Tests\45766A.xls
1	Test Number	45766A	
2	Test Sponsor	Engineered Controls International, LLC	
3	Company Type	Manufacturer	Elon, NC
4	Test Date	11/9/2017	REG
5	Valve Type	PRV19432FP035	
6	Manufacturer	Engineered Controls International, LLC	
7	Cap. Cert. ID No.	46415	
8	Set Pressure	35 psig	
9	Inlet Size	1/4 M	
10	Outlet Size	Top	
11	Stamped Capacity	40. SCFM	
12	Code Section	VIII	
13	Serial Number		
14	Date Code	10D17	
Operational Data and Measured Dimensions			
15	Warn Pressure		psig
16	Set Pressure	34.0	psig
17	Reset Set Pressure		psig
18	Blowdown	9.4	psi
19	Reset Blowdown		psi
20	Bore Diameter	0.280	inch
21	Lift		inch
Measured Data			
22	Flow Area	0.06158	in ²
23	Vessel Pressure	37.4	psig
24	P _b	14.29	psia
25	Vessel Temp.	75.6	°F
26	Nozzle Pressure	463.2	psig
27	Nozzle Temp.	71.4	°F
28	Nozzle Area	0.00456	in ²
Calculated Data			
29	Vessel Pressure	51.7	psia
30	Nozzle Total Press.	477.5	psia
31	Nozzle Total Temp.	531.4	°R
32	Critical Flow Function	0.6932	C
34	Meas. Cap.	0.04946	lbm/sec N2
35	Vessel Total Temp.	535.6	°R
36	Reference Temp.	520.0	°R
37	Nitrogen Density	0.073835	lbm/ft ³
38	Vessel Temp. Correction	1.014889	
39	Measured Capacity	40.1	scfm AIR
40	Slope	.7761	scfm/psia
41	Coefficient	0.6872	
42	Rated Capacity For Measured Set	38.8	scfm
43	Rated Slope	.75	
44			

National Board Testing Laboratory

Air Test - Sonic Flow Method: Test Summary

Test Summary for test 45766A:

V:\apps\Labview Programs\DATA\Air Tests\45766A.xls

1. Valve tested for Initial Production Capacity Certification 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: Sam Finley



Date

Test Personnel

Company Representatives

Steve Bowman
Sam Finley

George McGonagle

National Board Testing Laboratory

Nitrogen Test - Sonic Flow Method

Valve ID Data		Revision 3.8	V:\apps\Labview Programs\DATA\Air Tests\45765A.xls
1	Test Number	45765A	
2	Test Sponsor	Engineered Controls International, LLC	
3	Company Type	Manufacturer	Elon, NC
4	Test Date	11/14/2017	REG
5	Valve Type	PRV19432FP075	
6	Manufacturer	Engineered Controls International, LLC	
7	Cap. Cert. ID No.	46415	
8	Set Pressure	75 psig	
9	Inlet Size	1/4 M	
10	Outlet Size	Top	
11	Stamped Capacity	73. SCFM	
12	Code Section	VIII	
13	Serial Number		
14	Date Code	10D17	
Operational Data and Measured Dimensions			
15	Warn Pressure		psig
16	Set Pressure	74.2	psig
17	Reset Set Pressure		psig
18	Blowdown	21.0	psi
19	Reset Blowdown		psi
20	Bore Diameter	0.281	inch
21	Lift		inch
Measured Data			
22	Flow Area	0.06202	in ²
23	Vessel Pressure	81.5	psig
24	P _b	14.46	psia
25	Vessel Temp.	73.3	°F
26	Nozzle Pressure	887.3	psig
27	Nozzle Temp.	70.8	°F
28	Nozzle Area	0.00456	in ²
Calculated Data			
29	Vessel Pressure	96.0	psia
30	Nozzle Total Press.	901.8	psia
31	Nozzle Total Temp.	530.8	°R
32	Critical Flow Function	0.7006	C
34	Meas. Cap.	0.09447	lbm/sec N2
35	Vessel Total Temp.	533.3	°R
36	Reference Temp.	520.0	°R
37	Nitrogen Density	0.073835	lbm/ft ³
38	Vessel Temp. Correction	1.012708	
39	Measured Capacity	76.4	scfm AIR
40	Slope	.7967	scfm/psia
41	Coefficient	0.7004	
42	Rated Capacity For Measured Set	72.0	scfm
43	Rated Slope	.75	
44			

National Board Testing Laboratory


Air Test - Sonic Flow Method: Test Summary

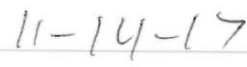
Test Summary for test 45765A:

V:\apps\Labview Programs\DATA\Air Tests\45765A.xls

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