



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX TRC 10.0004X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 3 Issue 2 (2016-03-31)
Date of Issue: 2020-04-20 Issue 1 (2012-08-20)
Issue 0 (2010-11-30)
Applicant: **Crane Instrumentation & Sampling, Inc.**
405 Centura Court, PO Box 4866
Spartanburg South Carolina 29305
United States of America
Equipment: **Electrically Heated Adjustable Pressure Regulators, models HPR-2, HPR-2XW, DHR, CV, DH2, CV2 and HBP Series**
Optional accessory:
Type of Protection: **Flameproof "d"**
Marking: Ex db IIC T1...T3 Gb
Ta= -30 °C to +55 °C

Approved for issue on behalf of the IECEx
Certification Body:

Stephen Winsor

Position:

Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Element Materials Technology
Unit 1 Pendle Place
Skelmersdale
West Lancashire





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Date of issue: 2020-04-20

Issue No: 3

Manufacturer: **Crane Instrumentation & Sampling, Inc.**
405 Centura Court, PO Box 4866
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United States of America

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[GB/TRC/ExTR10.0005/00](#)
[GB/TRC/ExTR10.0005/03](#)

[GB/TRC/ExTR10.0005/01](#)

[GB/TRC/ExTR10.0005/02](#)

Quality Assessment Report:

[CA/CSA/QAR09.0009/06](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The equipment is a series of Vaporizing Heated Regulators which are designed to supply heat to samples entering instrumentation systems. They can be used to pre-heat liquids, to prevent condensation of gases, or to vaporise liquids prior to gas analysis.

The equipment consists of a flameproof enclosure and pressure regulator. Electrical components, adjustable temperature controller, heater and thermal cut out (if fitted) are housed within the flameproof enclosure. The regulator itself has no electrical parts and is located outside of the flameproof enclosure. As such, the equipment is also referred to as a series of 'Electrically Heated Adjustable Pressure Regulators'.

A temperature class of T3 is marked on models rated at 100 W, 150 W, 200 W and 250 W when equipped with an internal thermal cut out. The 40 W, 50 W & 100 W models without thermal cut outs are rated at T3, T2 and T1 respectively.

All models are identified as GO Regulators with the coding MODEL-XXXXXXXXXX where the 'MODEL' is shown as either HBP, CV, CV2, DH2, DHR or H2 (for both HPR models) and XXXXXXXXXXXX represents specific model variants (11, 14 or 15 digits dependent on model type). Both HPR models are pre-fixed by 'H2' and are the same specification except that the HPR-2XW allows the end user to remove the heat exchanger, to allow cleaning or replacement when used with dirty liquids or liquids that polymerize and clog the heat exchange screen.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. A suitably rated and approved Ex d stopping box is to be fitted in accordance with IEC 60079-14.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 3: Change to applicant and manufacturer's name. Equipment assessed to latest editions of standards. Several other changes to critical and non-critical parts of equipment for three new model types HBP, DH2 and CV2 added.

Annex:

[Annex to IECEx C of C IECEx TRC 10.0004X is 3.pdf](#)



**Element Materials Technology,
Unit 1, Pendle Place,
Skelmersdale,
West Lancashire, WN8 9PN,
United Kingdom**

Annex to IECEx Certificate of Conformity

IECEx TRC 10.0004X issue No.:3

Routine Tests
1. Routine (100 %) hydrostatic testing (at 645 psi / 44.5 bar) as per 'Test Procedure for Vaporizing Pressure Regulator', drawing 113109.

Special conditions for manufacture
1. 150W, 200W and 250W models must be fitted with a thermal cut out (operates at 184°C).



Annex to IECEx Certificate of Conformity

IECEx TRC 10.0004X issue No.:3

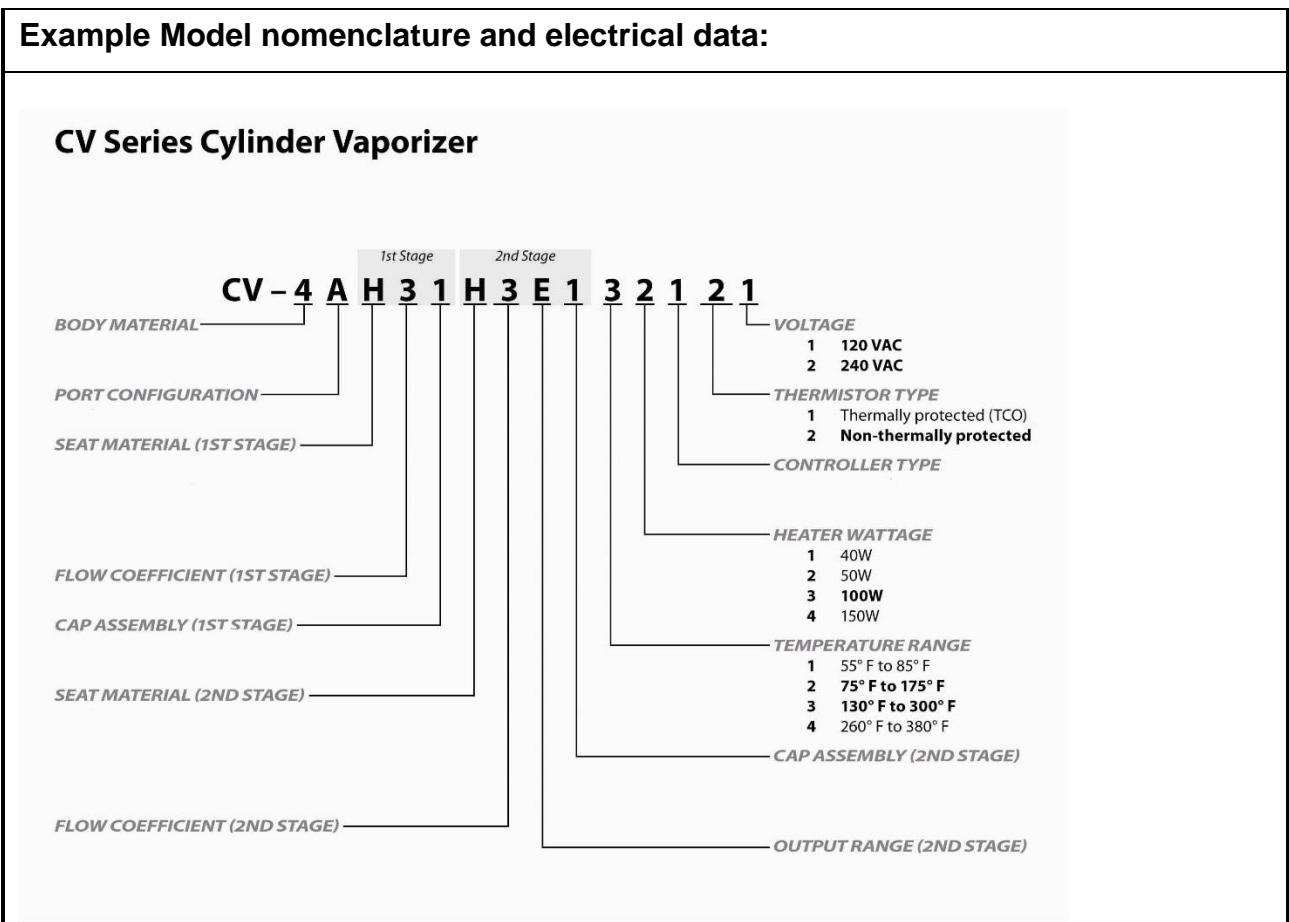
Manufacturer's Documents			
Title:	Drawing No.:	Rev. Level:	Date:
HPR-2 Heater Block Fitting	115845-ATEX	-	2019-08-01
AC Heater	G115829-ATEX	-	2018-10-18
Heater Block Assembly	115844-[]-ATEX	A	2016-10-20
Label AC Controller	115884	-	2016-05-03
HPR-2 Vaporizing Regulator Assy ATEX	115852-ATEX	A	2018-10-19
HPR-2XW Vaporizing Regulator Assembly ATEX	115856-ATEX	A	2018-10-19
CV Vaporizing Regulator Assembly ATEX	115858-ATEX	A	2018-10-19
CV2 Vaporizing Regulator Assembly ATEX	115880-ATEX	A	2018-10-19
DHR Vaporizing Regulator Assembly ATEX	115860-ATEX	A	2018-10-19
DH2 Vaporizing Regulator Assembly ATEX	115877-ATEX	A	2018-10-19
HBP Vaporizing Regulator Assembly ATEX	115865-ATEX	A	2018-10-19
Label-Vaporizing Regulator ATEX CERT	115854	A	2016-09-09
115791 (4 sheets)	115791_pcbart	1.4	2017-03-23
115791	115791_sch	1.4	2017-03-07
Ground Screw	116156	-	2016-10-04
HPR-2 Series Condulet Reducer 3/4 NPT / 1/2 NPT	046500-ATEX	-	2015-09-22
Condulet, Machined, ATEX	109819-ATEX	A	2018-10-19
Installation Manual for Vaporizing Regulator (15 sheets)	113117	F	2020-03-31
Service Assembly Manual for Vaporizing Regulators (5 sheets)	108727	F	2020-03-31
Test Procedure for Vaporizing Pressure Regulator (4 sheets)	113109	E	2018-07-19
Screw, Socket Set	018119	B	2010-06-11
Plug, Ground Leg, ATEX, IEC	046403-ATEX	A	2010-06-29
Cap, Condulet, ATEX	109323-ATEX	*	2003-09-03
Label, Temperature, Wiring, Porting ATEX, IEC	113144	A	2010-06-10

* Denotes information not provided by manufacturer



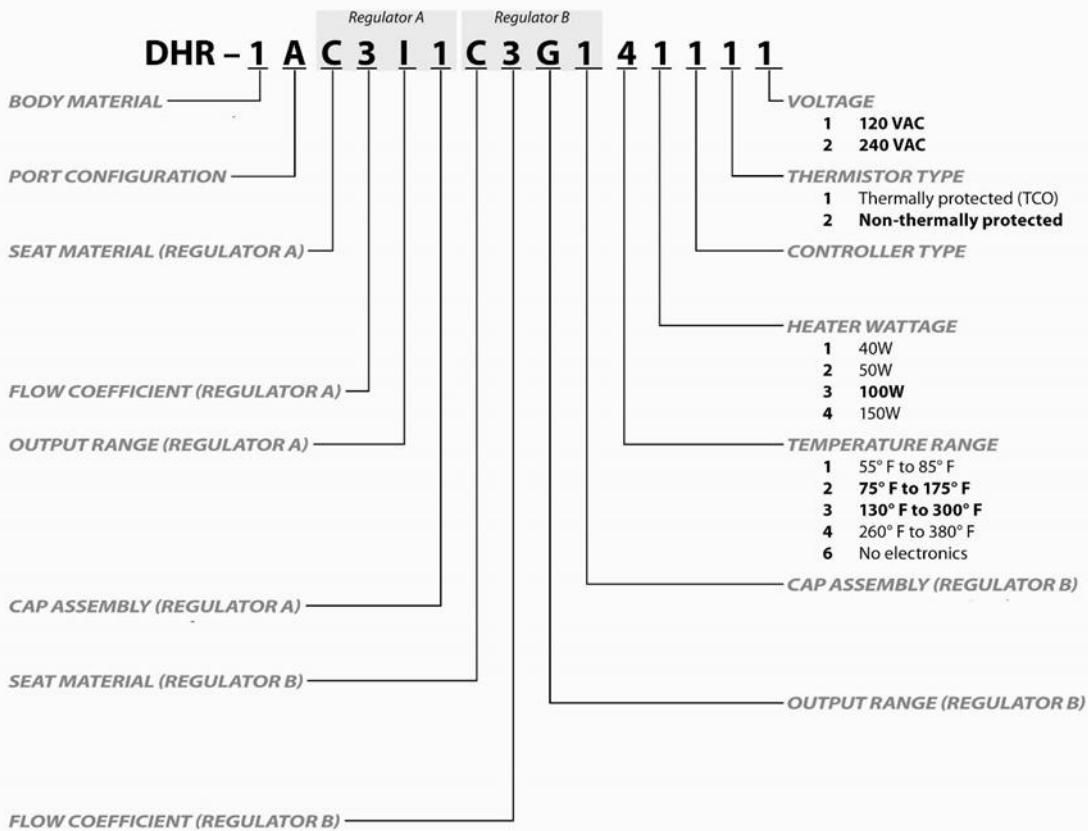
Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

Example Model nomenclature and electrical data:



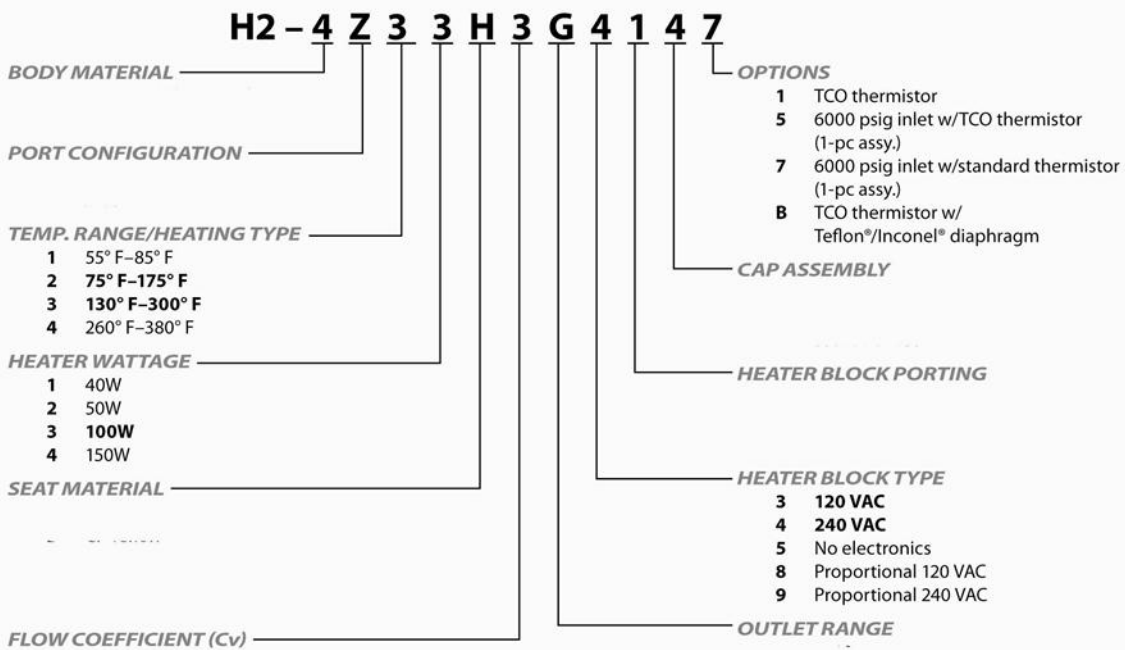
Example Model nomenclature and electrical data continued:

DHR Series

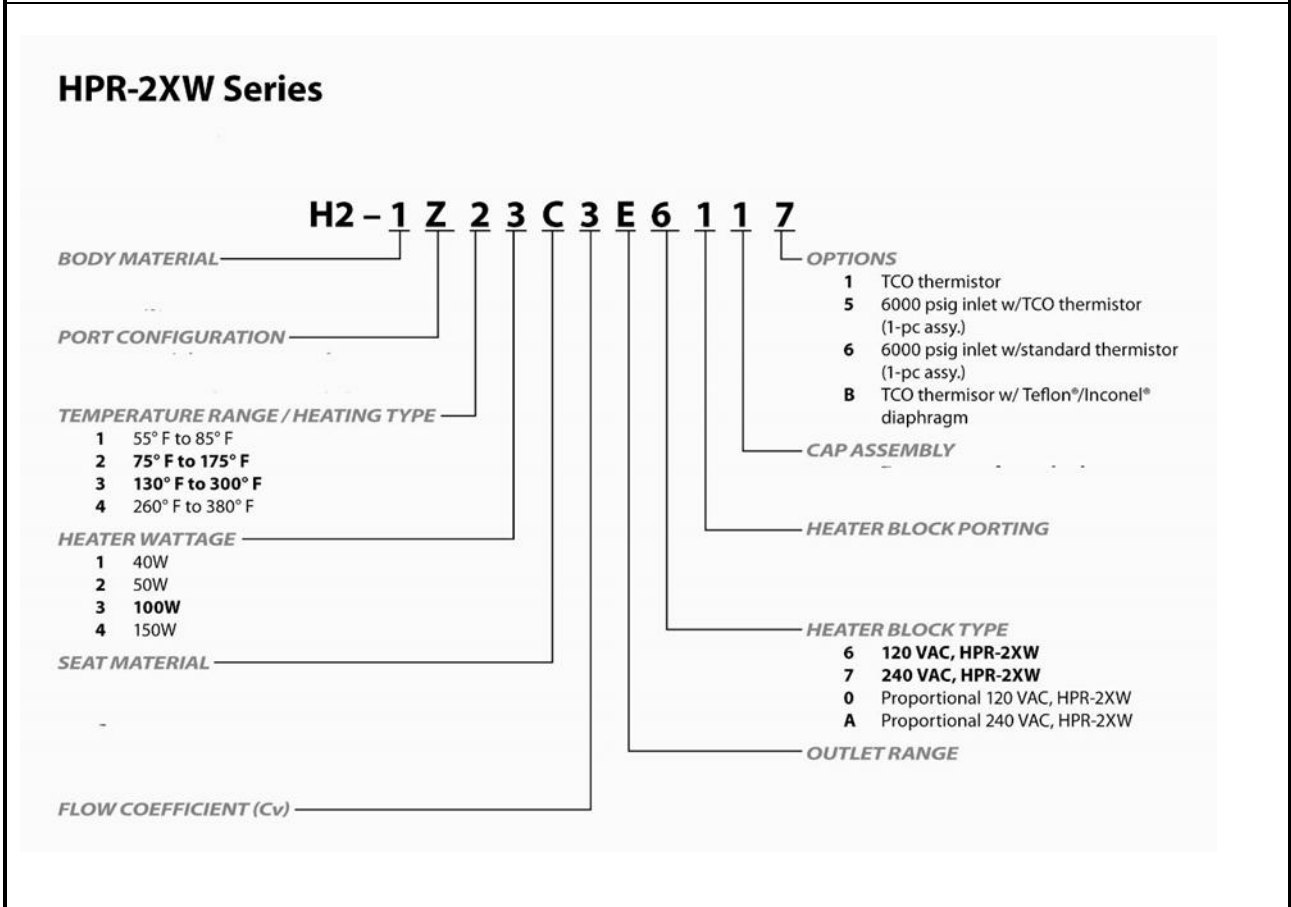


Example Model nomenclature and electrical data continued:

HPR-2 Series



Example Model nomenclature and electrical data continued:





Example Model nomenclature and electrical data continued:

HBP series

	HBP- X	X	X	X	X	X	X	X	X	X	X	X	X	
BODY MATERIALS														OTHER OPTIONS (CAN BE LEFT BLANK)
316L SST, SS DIAPHRAGM -1														1 - TCO THERMISTER
MONEL -4														
HASTELLOY C276 -6														CAP ASSEMBLY
316L SST, INCONEL DIAPHRAGM -C														-1 TAMPER PROOF SST (STANDARD)
														-4 TAMPER PROOF, PANEL MOUNT
PORTING CONFIGURATIONS														-7 TAMPER PROOF, CAPTURED VENT, SST
STANDARD -Z														-L BP6 TOPWORKS, SST
SEE DRAWING 102088 FOR PORTING STYLE														
														HEATER BLOCK PORTING
TEMPERATURE RANGE														-1 STD BLOCK 1/4 FNPT INLET, 1/8 FNPT OULET
55 F - 85 F (13 C - 29 C) -1														
75 F - 175 F (24 C - 80 C) -2														HEATER BLOCK TYPE
130 F - 300 F (54 C - 149 C) -3														-3 120VAC
260 F - 380 F (127 C - 194 C) -4														-4 230 VAC
														-6 120 VAC XW
HEATER WATTAGE														-7 230 VAC XW
40 WATTS -1														
50 WATTS -2														OUTPUT RANGE (PSIG)
100 WATTS -3														-C 0 - 10
150 WATTS (MUST HAVE TCO) -4														-D 0 - 25
200 WATTS (MUST HAVE TCO) -8														-E 0 - 50
250 WATTS (MUST HAVE TCO) -9														-G 0 - 100
														-I 0 - 250
SEAT MATERIALS														-J 0 - 500
CF PTFE -B														-K 0 - 1000
POLYIMIDE -C														-W 0 - 750
VITON -D														
HIGH DENSITY PTFE -I														FLOW COEFFICIENT (Cv)
KALREZ -K														-1 0.03
PEEK -Q														-3 0.06
														-5 0.2
														-7 0.3
														-C 0.025
														-E 0.04
														-I 0.005