

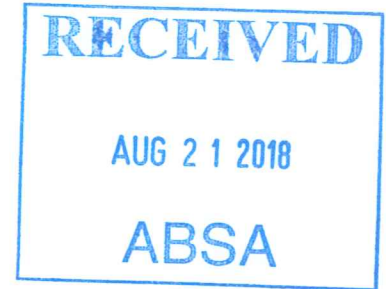


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Regina, SK S4R 1K3 Canada  
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info@tsask.ca  
www.tsask.ca

**REGISTRATION OF A PRESSURE FITTING DESIGN**

31-Jul-18

ABSA  
9410 20th Avenue NW  
Edmonton, AB  
T6N 0A4



**Attention: Cynthia Formaniuk**

**File Number: 10869 [ 0 F]**

**Re: Manufacturer: Generant Company Inc.**  
**Item: Stainless Steel CRV Valve**  
**Catalog or Drawing: CRV-1-250SS Rev. E**

TSASK Codes and Standards Compliance has registered the design listed above in accordance with The Boiler and Pressure Vessel Act and Regulations and CSA B51. The Canadian Registration Number (CRN) is:

**OC09270.23                      Expiry Date: June 05, 2028**

Please note that every fitting shall be constructed in strict accordance with the registered design.

Fitting registrations are required to be resubmitted for validation after ten (10) years from the registration date in accordance with CSA B51, Clause 4.2.1.

Should you require anything further, please do not hesitate to contact the Codes and Standards Compliance Office at your convenience.

Yours truly,

A handwritten signature in blue ink, appearing to read "Liting Huang".

Liting (Frank) Huang, Engineer-in-Training  
Codes and Standards Compliance

**Remarks:**

CRN registered under reciprocal agreement and conditional upon compliance with the notes on the ABSA registration dated on June 05, 2018.

STATUTORY DECLARATION Registration of Fittings

In this space, show facsimile of manufacturer's logo or trademark as it will appear on the fitting. GENERANT BUTLER, NJ

I, James Lesky, Director of Quality Assurance of Generant Company, Inc. located at 1865 Rt. 23 South, P.O. Box 768, Butler, NJ 07405 USA

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (check one)

- comply with the requirements of ASME B31.3 Process Piping Code 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 manufacture of these fittings is controlled by a quality control program which has been verified by the following authority, Kiwa Belgium, N.V. as being suitable for the manufacture of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are

Series Stainless Steel Cryogenic Relief Valves (brief description of fittings)

In support of this application, the following information, calculations and/or test data are attached: Product Literature, Assembly Drawing and Selection Guide, Design Calculations Statement and Wall Stress Calculations, Drawing of the Body, and ISO 9001:2015 Certificate.

DECLARED before me at Butler in the State of NJ this 16th day of May, 2018

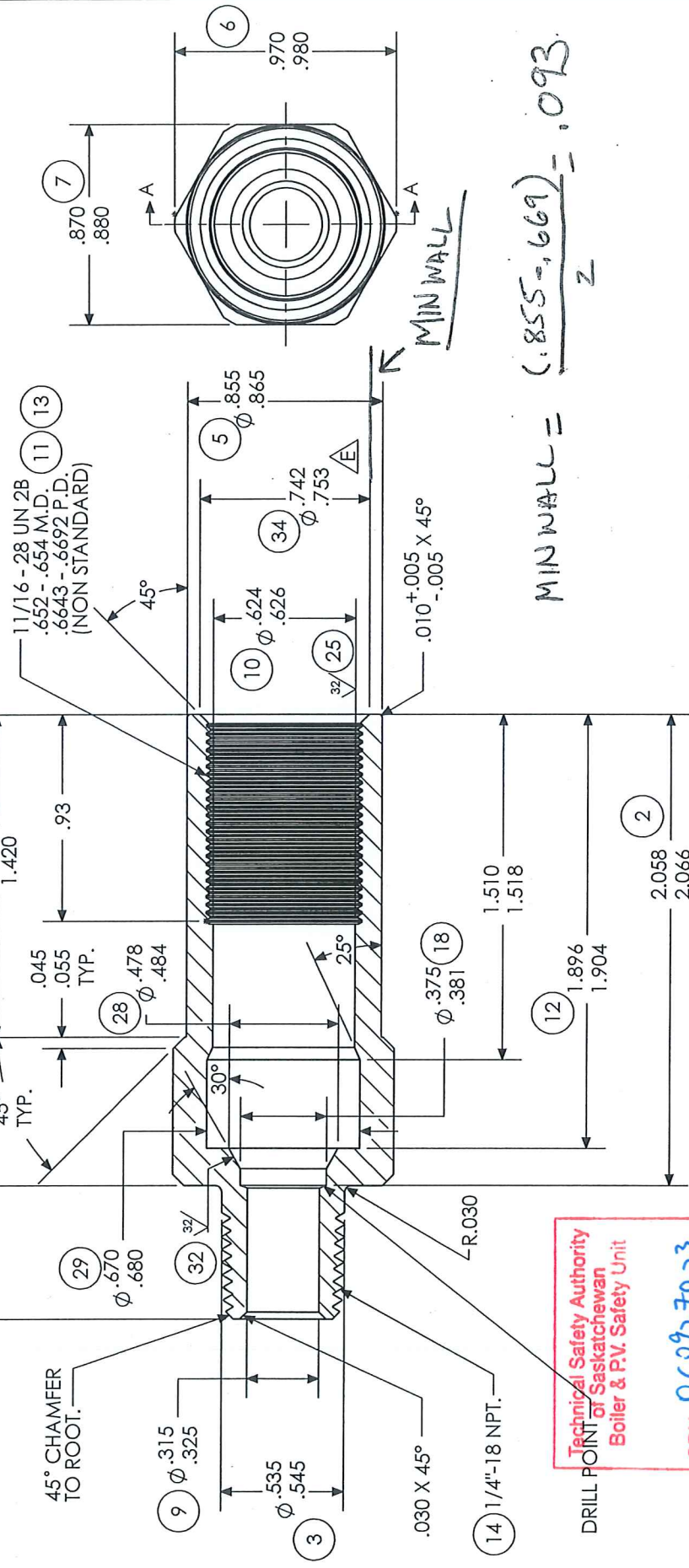
NANCY JEAN DYAK ID # 2273767 NOTARY PUBLIC STATE OF NEW JERSEY My Commission Expires March 31, 2021

(print) Nancy Dyak (a Commissioner of Oaths or Notary Public) (sign) Nancy Dyak (a Commissioner of Oaths or Notary Public) (signature of applicant)

Technical Safety Authority of Saskatchewan Boiler & P.V. Safety Unit CRN 0C09270.23 File 10867 Date July 31, 2018 Design Survey Office

For ABSA Office Use Only: NOTES: To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard B51, Clause 4.2, and is accepted for registration in Category C. Registration Number: 0C09270.23 Date Registered: July 31, 2018 Expiry Date: June 05, 2028

REVISIONS			
REV.	DESCRIPTION	DCR #	DATE
A	CONVERTED TO ACAD	BZD	12/26/02
B	DRILL POINT WAS 30 DEGREE	CQQ	12/14/05
C	SEE ECO FOR CHANGES	CSU	2/15/06
D	25 DEGREE LEAD WAS 30 DEGREE	0542	4/16/09
E	IDENTIFIED .742/.753 Ø @TOP OF 45°	1316	1/13/11



<b>GENERANT</b> TITLE: 1/4" CRV BODY, 316SS DWG NUMBER: CRV-1-250SS		DATE: 1/11/2011 SCALE: 3:2 SIZE: A SHEET: 1 of 1
MATL: 316 SS, ASTM A479 TOLERANCE SCHEDULE UNLESS OTHERWISE SPECIFIED FRACTIONAL: ± 1/64" ANGLES: ± 1/2° XXX ± .005 CONCENTRICITY: .005 T.I.R. FINISHED SURFACES: 63 R <sub>a</sub> BREAK CORNERS/EDGES: .016 MAX		

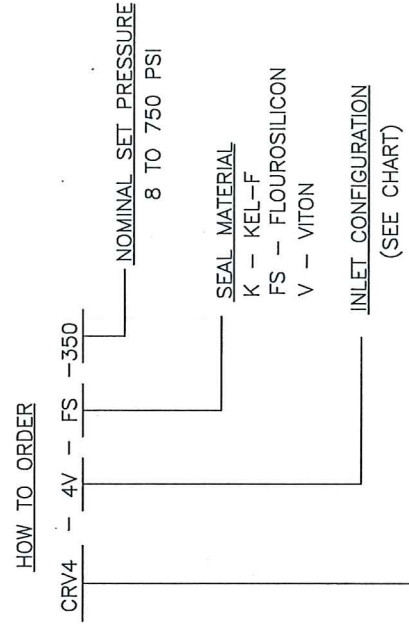
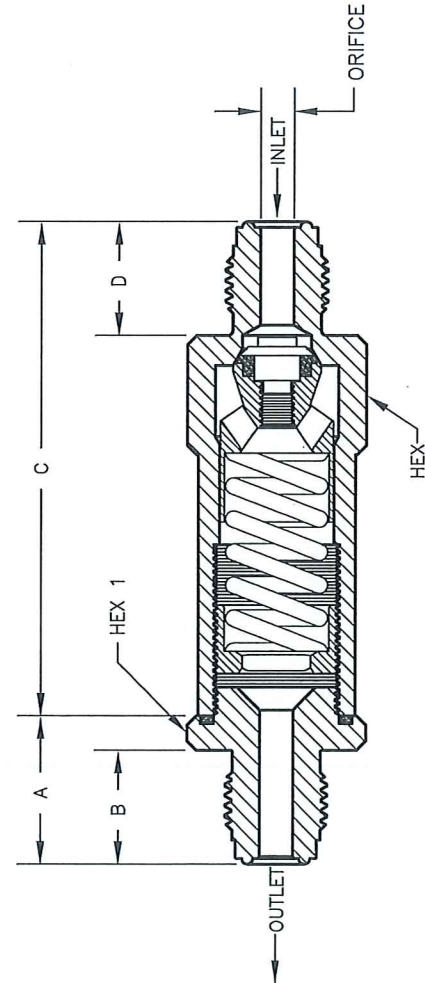
**Technical Safety Authority**  
**Boiler & P.V. Safety Unit**  
 CRN 00927023  
 File 10869  
 Date July 31 2018  
 REGISTERED  
 Design Survey Office

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REVISIONS		ECO	DESCRIPTION	DATE	REV.
DNV	NEW RELEASE			7-16-08	A

OUTLET CONFIG.	OUTLET CONNECTION	HEX 1	A	B	THREAD
CRVD	ATMOSPHERE	7/8"	.750	NA	NA
CRV4	1/4" FEMALE NPT	1" RD.	.380	NA	1/4"-18
CRV6	3/8" FEMALE NPT	1" RD.	.675	NA	3/8"-18
CRV8	1/2" FEMALE NPT	1" RD.	.740	NA	1/2"-14
CRV4V	1/4" VCR	7/8"	.805	.620	9/16"-18
CRV8V	1/2" VCR	1"	.935	.750	7/8"-14
CRV4T	1/4" BI-LOK DUAL FERRULE TUBE	7/8"	.595	.407	7/16"-20
CRV8T	1/2" BI-LOK DUAL FERRULE TUBE	7/8"	.655	.468	3/4"-20

INTLET COFIG.	INLET CONNECTION	HEX	C	D	THREAD	ORIFICE
4	1/4" MALE NPT	7/8"	2.650	.585	1/4"-18	.315
8	1/2" MALE NPT	7/8"	2.650	.585	1/2"-14	.315
4V	1/4" VCR	7/8"	2.680	.620	9/16"-18	.182
8V	1/2" VCR	1"	2.812	.750	7/8"-14	.402
4T	1/4" BI-LOK DUAL FERRULE TUBE	7/8"	2.650	.407	7/16"-20	.192
8T	1/2" BI-LOK DUAL FERRULE TUBE	7/8"	2.812	.468	3/4"-20	.378



0009270.23

**NOTES:**  
 1) SUPPLIED, CLEANED FOR OXYGEN SERVICE. HEAT SEALED IN POLY BAG WITH THREAD PROTECTOR.

2) OTHER INLET AND OUTLET CONFIGURATIONS AVAILABLE CONSULT FACTORY, (IE: BSPT, BSPP, SAE ...)

3) ALL INLET CONFIGURATIONS UTILIZE THE SAME INTERNAL DIMENSIONS AND POPPET. SEALS AND SPRING DEPENDS ON SELECTION.

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		TITLE: STAINLESS CRV RELIEF VALVE SELECTION GUIDE	
APPROVALS DRAWN H.H. PROD. M.G. ENG. M.G. MFG. B.B. Q.A. M.G.	DATE: 7-15-08	DWG. NO. CRV - * - * - *	REV. A
MAT'L: STAINLESS STEEL TOLERANCE SCHEDULE UNLESS OTHERWISE SPECIFIED FRACTIONAL: ± 1/64" ANGLES: ± 1/2" XX ± .010 XXX ± .005 CONCENTRICITY: .005 T.I.R. FINISHED SURFACES: 63 Ra BREAK CORNERS/EDGES: .016 MAX.	SCALE: 1:1	SHEET: 1 OF 1	

**CRYOGENIC RELIEF VALVE (STAINLESS)**

1/4" and 1/2" NPT

-4 and -8 Metal To Metal Face Seal

1/4" and 1/2" Bi-Lok Dual Ferrule Tube

10 - 750 Psig (0.69 - 51.7 Bar)

**CRV**  
**STAINLESS**

**SERIES**

**Description**

The Generant Series Stainless Steel CRV, Cryogenic Relief Valve is a spring reference over pressure protection device. The Stainless CRV is supplied cleaned and packaged for oxygen service making it an ideal choice for most cryogenic relief valve applications. The valve can be ordered with set pressures ranging from 10 to 750 Psig (0.69 to 51.7 Bar) and come factory preset and permanently locked. Relief pressure can not be altered or adjusted in the field. Seat and poppet geometry combined with optimized spring ranges provide high flow rates with minimum pressure accumulation. Compact design and availability of a variety of inlet and outlet configurations reduces size and piping requirements. Relief pressure can be discharged to atmosphere or to a downstream connection. The CRV can be specified with PCTFE (set pressures above 50 Psig (3.54 Bar)), Viton®, and Fluorsilicone seals.

**Features**

- Available in NPT, Metal to Metal Face Seal and Bi-Lok Dual Ferrule Tube Connections
- High Flow Capacity and Excellent Reseal Performance
- Discharge to Atmosphere or a Wide Variety of Inline Piping Configurations
- Supplied Factory Preset Set and Permanently Locked for Tamper Proof Service
- 100% Factory Tested for Leakage, Crack and Reseal Performance
- Optional Deflector Cap available for diverting exhausted gas
- Cleaned and Packaged for Oxygen Service

**Technical Data**

Nominal Set Pressure Range: 10 – 750 Psig (0.69 to 51.7 Bar)  
 Factory Set Tolerance: +/- 5% of Specified Pressure  
 Zero Leakage to 95% of Set Pressure  
 Full Rated Flow @ 110% of Set Pressure  
 Reseal: 90% (80% for PCTFE seals set below 100 psig (6.9 Bar))  
 Unaffected by up to 10% Back Pressure  
 Temperature Rating: -320° to 392° F (-196° C to 200° C)  
based on seal material (see How To Order)  
 Lubricant: Krytox®

0C09270.23

**Materials of Construction**

Component	Material
Body, Poppet, Seat Screw, Spring Retainer, In-Line Adapter <sup>1</sup> , Nuts and Ferrules	316 Stainless Steel (ASTM A479) <sup>2</sup>
Spring	302 or 17-7 PH Stainless Steel (ASTM A313)
Seals	PCTFE (ASTM D1430), Viton® or Teflon®

<sup>1</sup> Inline Adapters utilize Viton® o-ring seals. Metal to Metal Face Seal Inline Adapters are Electro Polished to 10 Ra Max.

<sup>2</sup> Valves supplied with Metal to Metal Face Seal connections have Electro Polished Inlet, Poppet and Seat Screw to 10 Ra Max.

