

Certificate of Compliance

Certificate: 2687141

Master Contract: 259904

Project: 2687141

Date Issued: December 16, 2013

Issued to: **Engineered Flexible Products, Inc**
5331 Quam Ave NE
Saint Michael MN 55376
USA
Attention: Roy E. Vance

*The products listed below are eligible to bear the CSA Mark shown
With adjacent indicator 'US'*



Issued by: James J. Horvath, PE

James J. Horvath, PE

PRODUCTS

CLASS – 3313 83 HOSES (GAS) –Flexible Metallic –Certified to U.S. Standards

Model	Size
VLoop with c/s thread-ends	
CSA-VLOOP-0050MNPT	½
CSA-VLOOP-0075MNPT	¾
CSA-VLOOP-0100MNPT	1
CSA-VLOOP-0125MNPT	1¼
CSA-VLOOP-0150MNPT	1½
CSA-VLOOP-0200MNPT	2
CSA-VLOOP-0250MNPT	2½
CSA-VLOOP-0300MNPT	3
CSA-VLOOP-0400MNPT	4

The 'US' indicator adjacent to the CSA Mark signifies that the product has been evaluated to the applicable ANSI/UL Standards, for use in the U.S.. This 'US' indicator includes products eligible to bear the 'NRTL' indicator. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards 268714 December 16, 2013 259902687141



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Model	Size
VLoop with c/s weld-ends	
CSA-VLOOP-0050WELD	½
CSA-VLOOP-0075WELD	¾
CSA-VLOOP-0100WELD	1
CSA-VLOOP-0125WELD	1¼
CSA-VLOOP-0150WELD	1½
CSA-VLOOP-0200WELD	2
CSA-VLOOP-0250WELD	2½
CSA-VLOOP-0300WELD	3
CSA-VLOOP-0400WELD	4
Straight connector with c/s thread-ends	
CSA-0050-MNPT-16	½
CSA-0075-MNPT-18	¾
CSA-0100-MNPT-19	1
CSA-0125-MNPT-19	1¼
CSA-0150-MNPT-20	1½
CSA-0200-MNPT-20	2
CSA-0250-MNPT-22	2½
CSA-0300-MNPT-25	3
CSA-0400-MNPT-30	4
Straight connectors with c/s weld-ends	
CSA-0050-WELD-16	½
CSA-0075-WELD-18	¾
CSA-0100-WELD-19	1
CSA-0125-WELD-19	1¼
CSA-0150-WELD-20	1½
CSA-0200-WELD-20	2
CSA-0250-WELD-22	2½
CSA-0300-WELD-25	3
CSA-0400-WELD-30	4

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APPLICABLE REQUIREMENTS

Ninth Edition of ANSI/UL 536-1997 for Flexible Metallic Hose Revised June 9, 2003

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities

17.1 A hose shall be marked with the following information:

- a. The manufacturer's identification stamped on a hose part.
- b. A distinctive model designation to identify the hose, stamped on a hose part.
- c. The maximum working pressure. This data may appear on a tag securely attached to the assembly.
- d. The minimum radius of bend to which the hose may be subjected in service, together with other instructions or precautions, as recommended by the manufacturer. This information shall appear on a separate tag securely attached to the assembly or on an instruction sheet accompanying each hose assembly

17.2 The marking as stamped, shall be legible and permanent. A tag shall be on linen or equivalent wire to the assembly

17.3 If a manufacturer produces hose at more than one factory, each assembly shall have a distinctive marking to identify it as the product of a particular factory. DNA



CSA INTERNATIONAL

Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
2687141	December 16, 2013	Original Certification. Model Comparison for Metraflex and Engineered Flexible Products
		VLoop with c/s thread-ends
		VLACT4050 CSA-VLOOP-0050MNPT
		VLACT4075 CSA-VLOOP-0075MNPT
		VLACT4100 CSA-VLOOP-0100MNPT
		VLACT4125 CSA-VLOOP-0125MNPT
		VLACT4150 CSA-VLOOP-0150MNPT
		VLACT4200 CSA-VLOOP-0200MNPT
		VLACT4250 CSA-VLOOP-0250MNPT
		VLACT4300 CSA-VLOOP-0300MNPT
		VLACT4400 CSA-VLOOP-0400MNPT
		VLoop with c/s weld-ends
		VLACW4050 CSA-VLOOP-0050WELD
		VLACW4075 CSA-VLOOP-0075WELD
		VLACW4100 CSA-VLOOP-0100WELD
		VLACW4125 CSA-VLOOP-0125WELD
		VLACW4150 CSA-VLOOP-0150WELD
		VLACW4200 CSA-VLOOP-0200WELD
		VLACW4250 CSA-VLOOP-0250WELD
		VLACW4300 CSA-VLOOP-0300WELD
		VLACW4400 CSA-VLOOP-0400WELD
		Straight connector with c/s thread-ends
		GASCT0050 CSA-0050-MNPT-16
		GASCT0075 CSA-0075-MNPT-18
		GASCT0100 CSA-0100-MNPT-19
		GASCT0125 CSA-0125-MNPT-19



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Project	Date	Description	
2687141	December 16, 2013	GASCT0150 GASCT0200 GASCT0250 GASCT0300 GASCT0400 Straight connectors with c/s weld-ends GASCW0050 GASCW0075 GASCW0100 GASCW0125 GASCW0150 GASCW0200 GASCW0250 GASCW0300 GASCW0400	CSA-0150-MNPT-20 CSA-0200-MNPT-20 CSA-0250-MNPT-22 CSA-0300-MNPT-25 CSA-0400-MNPT-30 CSA-0050-WELD-16 CSA-0075-WELD-18 CSA-0100-WELD-19 CSA-0125-WELD-19 CSA-0150-WELD-20 CSA-0200-WELD-20 CSA-0250-WELD-22 CSA-0300-WELD-25 CSA-0400-WELD-30