REGISTERED



CRN: CSA-0020522.56

Technical Safety Authorit Registration Process administence by 2 To Free: (856)530-8599

Of Saskatchewan CSA Group per CSA B51

FAX: (306)787-9273 To Free: (856)780-9255

Empl: byleroemisting tank ca

2202 2nd Ave. Regina, SK S4R 1K3

Vebsile: <u>www.tsask.ca</u>

Statutory Declaration (Registration of Fittings)

Rev. 10/2012 Page 1 of 1

		1370181	TSK-1008
l. Declara	ation Information		
, Joel Feld	iman		In this space, show facsimile of
	sident, Engineering	s-vii is iiii iiš esas	manufacturer's logo or trademark as it will appear on the fitting.
	(company title, e.g. vice president, plant manage se in a position of authority in the manufacturing plant		Suggestels
f: Swagelo	The second secon	and a many of burnsons	OMODEROR
owage.c	(name of manufacturer)		
ocated at:	Headquarters: 29500 Solon Road	Solon, Ohio	44139 USA
	(Plant Address - Apt/Street)	(City, Prov)	(Postal Code)
	declare that the fittings listed hereinunde ty Act (check one)	er, which are subject to the Sas	katchewan Boiler and Pressure
Comp	ly with the requirements of ASME B31 3 fo	r unlisted components, ISO 10380 w	ich specifies the dimensions
	title of recogn	zed North American Standard)	
mater	ials of construction, pressure / temperals	ire ratings and identification ma	irking of the fittings, or
O Are no	ot covered by the provisions of a recogni	zed North American standard a	ind are therefore manufactured
lo con	nply with		as supported by the attached
data v	which identifies the dimensions, materials	s of construction, pressure / ten	perature ratings and the basis
for su	ch ratings, and the marking of the fittings	for identification.	•
further decl	are that the manufacturer of these fitting	s is controlled by a quality cont	rol program which has been
	e following authority, BSI	• • •	ing suitable for the manufacturer
	igs to the stated standard. The fittings co		
Calegory D. H			The state of the s
	this application, the following information		
SO 9001:	2015 Certificate, Attachment A, A	ttachment B, Catalog Infor	mation and other Support
Document	S		
. Declara	ition	YER SIDESTIFIC	
ECLARED	before me at Solon	In the State	of DOLD
is Oth	day of Mau	. 2D18	
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2.5	Hotary Public,	State of Ohio	
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	Use Only		
o the best of	my knowledge and belief, the application me use 4.2, and is accepted for registration in Ca	ets the requirements of the Boller	and Pressure Vessel Safety Act and
			T 1 11 2000
(Registration	0020522.56 Number	(Date Registered - MM DD YYYY)	(Expiry Diste – MM DD YYYY)
for a filled on manage p		(For the Administrator / Chief Inspector	
		A COR IN COSA	A. Daywaii
		Group Group	
			CSA TSK-100



Canadian Registration Number Submittal Swagelok Submission # FX-HOSE-2017

May 03, 2018 Page 1 of 5

Attachment B: Scope of Registration for Swagelok FX Series Hose Assemblies (Category D)

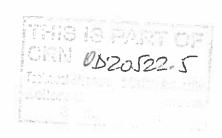
Product Scope

The table below represents the scope of Swagelok FX series hose assemblies covered by this submission for CRN approval. These hose assemblies have been evaluated in accordance with ASME B31.3 and ISO 10380. The referenced product catalogues do not represent the full scope of the submission but rather detail some of the most common options.

Summary Table

Product Series	Pressure Retaining Material	End Connection & Sizes	Nom. Hose Size (in.)	Maximum Working Pressure in (Psig)		Design Code of
				@ Min. Temp.	@ Max. Temp.	Construction
	Core: 316L SS (ASTM A240) Braid: 321 SS (ASTM A478) Or 316L SS (ASTM A240) Weld Collar: 304 SS (ASTM A269) End Connections: Strain-Hardened 316 SS (ASTM A479)	Tube Fitting 1/4" – 1/2", 4-10 mm [TA, TM, SL, SM]	1/4	6000 @ -325°F	4236 @ 1000°F	ASME B31.3, ISO 10380
		NPT Female 1/8" – 1/4" [PF] NPT Male 1/8" – 1/2" [PM] Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 1/4" – 1/2" [MT] Female ISO/BSP Tapered Threads (ISO 7) 1/4" [FT]		6000 @ -60°F	5640 @ 400°F	
FX Series		Male Swivel Nut VCR ¼" [RM] Female VCR Fitting ¼" [RF]		5500 @ -325°F	3883 @ 1000°F	
Metal Hose		Tube Fitting 12mm [TM]		5365 @ -325°F	3787 @ 1000°F	
		NPT Female 3/8" [PF]		5300 @ -60°F	4982 @ 400°F	
		Tube Butt Weld 1/4" [TB]		5100 @ -325°F	3600 @ 1000°F	
		NPT Female ½" [PF]		4900 @ -60°F	4606 @ 400°F	
		Tube Butt Weld ½" [TB]		3700 @ -325°F	2612 @ 1000°F	
		Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2" [RF]		3000 @ -325°F	2118 @ 1000°F	





Material Core: 316L SS	Tube Fitting 1/4" – 1/2", 4-12 mm [TA, TM, SL, SM] Female VCO Fitting 1/2" [VF] Male Swivel Nut VCR ¼" [RM] Female VCR Fitting ½" [RF] NPT Female 1/4" – 1/4" [PF] NPT Male 1/4" – 1/2" [PM] Male ISO/BSP Tapered threads (ISO 7) 1/4" – 3/8" [MT]	Size (in.)	@ Min. Temp. 5000 @ -325°F	Psig) @ Max. Temp. 3530 @ 1000°F	of Construction
	[TA, TM, SL, SM] Female VCO Fitting 1/2" [VF] Male Swivel Nut VCR ¼" [RM] Female VCR Fitting ¼" [RF] NPT Female 1/4" – 1/4" [PF] NPT Male 1/4" – 1/2" [PM] Male ISO/BSP Tapered threads		5000	3530	
	NPT Maie 1/4" – 1/2" [PM] Male ISO/BSP Tapered threads				ASME B31.3, ISO 10380
		3/8	5000 @ -60°F	4700 @ 400°F	
	NPT Female ½" [PF]		4900 @ -60°F	4606 @ 400°F	
(ASTM A240)	Tube Butt Weld 1/2" [TB]		3700 @ -325°F	2612 @ 1000°F	
Braid: 321 SS (ASTM A478) or 316L SS (ASTM A240) Weld Collar: 304 SS (ASTM A269) End Connections: Strain-Hardened 316 SS (ASTM A479)	Tube Butt Weld 3/8" [TB]		3300	2329	
	Male Swivel Nut VCR 1/2" [RM]		3000	2118	
	Tube Fitting 1/4" – 3/4", 6-18 mm [TA, TM, SL, SM] Male Swivel Nut VCR 1/4" [RM] Female VCR Fitting 1/4" [RF] Female VCO Fitting 1/2" [VF]	1/2	4500 @ -325°F	3177 @ 1000°F	
	NPT Female 3/8-1/2" [PF] NPT Male 1/4" — 3/4" [PM] Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 3/8" — 1/2" [MT] Female ISO/BSP Tapered Threads (ISO 7) 1/2" [FT]		4500 @ -60°F	4230 @ 400°F	
	NPT Female 1" [PF]		4400 @ -60°E	4092	
	Tube Butt Weld ½" [TB]		3700	2612	
	Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2" [RF]	F	3000	2118 @ 1000°F	
	Male Swivel Nut VCR 3/4" [RM]		2800 @ -325°F	1976 @ 1006°F	
(t	(ASTM A478) or 316L SS (ASTM A240) Weld Collar: 304 SS (ASTM A269) End Connections: rain-Hardened 316 SS	(ASTM A478) or 316L SS (ASTM A240) Weld Collar: 304 SS (ASTM A269) End Connections: rain-Hardened 316 SS ASTM A479) Male Swivel Nut VCR 1/4" [RM] Female VCR Fitting 1/4" [RF] Female VCR Fitting 1/4" [RF] Female VCO Fitting 1/2" [VF] NPT Female 3/8-1/2" [VF] NPT Male 1/4" — 3/4" [PM] Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 3/8" — 1/2" [MT] Female ISO/BSP Tapered Threads (ISO 7) 1/2" [FT] NPT Female 1" [PF] Tube Butt Weld ½" [TB] Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2" [RF]	Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2" [RF] Tube Fitting 1/4" – 3/4", 6-18 mm [TA, TM, SL, SM] Male Swivel Nut VCR 1/4" [RM] Female VCR Fitting 1/4" [RF] Female VCR Fitting 1/4" [RF] Female VCO Fitting 1/2" [VF] NPT Female 3/8-1/2" [PF] NPT Male 1/4" – 3/4" [PM] Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 3/8" – 1/2" [MT] Female ISO/BSP Tapered Threads (ISO 7) 1/2" [FT] NPT Female 1" [PF] Tube Butt Weld ½" [TB] Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2" [RF] Male Swivel Nut VCR 3/4" [RF] Male Swivel Nut VCR 3/4" [RF] Male Swivel Nut VCR 3/4" [RF] Female VCR Fitting 3/4" [RF]	Male Swivel Nut VCR 1/2" [RM] Genale VCR Fitting 1/4" - 3/4", 6-18 mm TA, TM, SL, SM] Male Swivel Nut VCR 1/4" [RM] Female VCR Fitting 1/4" [RF] Male Swivel Nut VCR 1/4" [RM] Female VCR Fitting 1/4" [RF] Female VCD Fitting 1/2" [VF] NPT Female 3/8-1/2" [PF] NPT Male 1/4" - 3/4" [PM] Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 3/8" - 1/2" [MT] NPT Female 1" [PF] Tube Butt Weld ½" [TB] Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2" [RM] Female VCR Fitting 1/2" [RM] Female VCR Fitting 1/2" [RF] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RE] Male Swivel Nut VCR 3/4" [RM] Male Swivel Nut VCR 3/4"	Male Swivel Nut VCR 1/2" [RM] 3000 2118 3000 2118 3000 2118 3000 3177 304 SS ASTM A240) End Connections: rain-Hardened 316 SS ASTM A479) Emale VCO Fitting 1/4" Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 3/8" – 1/2" [MT] NPT Female 1" [PF] Tube Butt Weld ½" [TB] A400 4092 400°F 3700 2612 3700 2612 325°F 3000 2118 4400 4092 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 2612 3700 3700 2612 3700 3700 2612 3700 37

178 Rexdate Boulevard, Foronto, UN Canada M9W 1R3

Product Series	Pressure Retaining Material	End Connection & Sizes	Nom. Hose	Maximum Working Pressure in (Psig)		Design Code of
Series			Size (in.)	@ Min. Temp.	@ Max. Temp.	Construction
	Core: 316L SS (ASTM A240) Braid: 321 SS (ASTM A478) Or 316L SS (ASTM A240) Weld Collar: 304 SS (ASTM A269) End Connections: Strain-Hardened 316 SS (ASTM A479)	Tube Fitting 1/2" – 1", 12-20 mm [TA, TM, SL, SM] Female VCO Fitting 1/2" – 3/4" [VF]	3/4	3600 @ -325°F	2541 @ 1000°F	
		NPT Female 1/2"-3/4" [PF] NPT Male 1/2" – 1" [PM] Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 1/2"-1" [MT] Female ISO/BSP Tapered		3600 @ -60°F	3384 @ 400°F	
		Threads (ISO 7) 3/4"-1" [FT] Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2"-1" [RF]		3000 @ -325°F	2118 @ 1000°F	
		Male Swivel Nut VCR 5/8"-3/4" [RM] Female VCR Fitting 3/4" [RF]		2800 @ -325°F	1976 @ 1000°F	
FX Series		Tube Butt Weld 3/4"-1" [TB]		2400 @ -325°F	1694 @ 1000°F	
Metal Hose		Tube Fitting 1/2" – 1-1/4", 16-28 mm [TA, TM, SL, SM] Male Swive! Nut VCR 1" [RM] Female VCR Fitting 1" [RF] Female VCO Fitting 1" [VF]	1	3000 @ -325°F	2118 @ 1000°F	
		NPT Female 1" [PF] NPT Male 1/2" – 1" [PM] Female VCO Fitting 1/4" Male ISO/BSP Tapered threads (ISO 7) 1" [MT] Female ISO/BSP Tapered Threads (ISO 7) 1" [FT]		3000 @ -60°F	2820 @ 400°F	
		Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RF]		2800 @ -325°F	1976 @ 1000°F	
		Tube Butt Weld 3/4"-1" [TB]		2400 @ -325°F	1694 @ 1000°F	

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ATTACHMENT TO

C.R.N.C.S.A-0020122.1

Signed._

178 Rexdale Boulevard, Foronto, UN Canada M9W 1R3

0020522.5

Swagelok

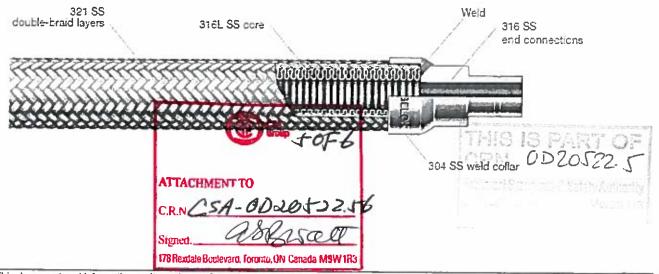
Canadian Registration Number Submittal Swagelok Submission # FX-HOSE-2017

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Product Series	Pressure Retaining Material	End Connection & Sizes	Nominal Hose Size	Pre: in (n Working ssure Psig)	Design Code of
avian at the	material		(in.)	@ Min. Temp.	@ Max. Temp.	Construction
	Core: 316L SS (ASTM A240) Braid: 321 SS (ASTM A478) or 316L SS (ASTM A240) Weld Collar: 304 SS (ASTM A269) End Connections: Strain-Hardened 316 SS (ASTM A479)	Tube Fitting 1-1/4" – 1-1/2", 28- 32 mm [TA, TM, SL, SM]	1-1/4	2600	1835 @ 1000°F	ASME B31.3, ISO 10380
		NPT Female 1-1/4" [PF] NPT Male 1" - 1-1/4" [PM] Male ISO/BSP Tapered threads (ISO 7) 1-1/4" [MT]		2600 @ -60°F	2444 @ 400°F	
		Tube Butt Weld 1-1/4" [TB]		2400 @ -325°F	1694 @ 1000°F	
FX Series Metal		Tube Fitting 1-1/2", 38 mm [TA, TM, SL, SM] Tube Butt Weld 1-1/2" [TB]	1-1/2	2200 @ -325°F	1553 @ 1000°F	
Hose		NPT Female 1-1/2" [PF] NPT Male 1" 1-1/2" [PM] Male ISO/BSP Tapered threads (ISO 7) 1-1/2" - 2" [MT]		2200 @ -60°F	2068 @ 400°F	
i		Tube Fitting 2" [TA, SL] Tube Butt Weld 2" [TB]	2	1675 @ -325°F	1182 @ 1000°F	
		NPT Male 1-1/2" – 2" [PM] Male ISO/BSP Tapered threads (ISO 7) 2" [MT]	2	1675 @ -60°F	1574 @ 400°F	

Product Illustration

All end connections are welded onto the hose using weld collars.



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Product Options:

Additional options that do not affect pressure and/or temperature ratings may be made available within the scope of this approval. Examples of these would include the following:

Braid Options

316L SS

Cover Options

- Armor guard Interlocking, flexible 302 stainless steel.
- Fire jacket Woven fiberglass coated with specially compounded aerospace-grade silicone rubber
- Thermosleeve Braided fiberglass with saturated synthetic material coating.

Tag and Marking Options

- Mat tag Polyester tag with customer-specified text
- · Lanyard tag Stainless steel tag with customer-specified text
- Clamp tag Stainless steel tag with customer-specified text

End Connection Seals or Sealant Options

- VCO O-rings
- VCR Gasket
- · Pipe Thread ends thread sealant

Quality System

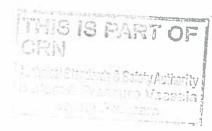
The Swagelok Company quality system complies with the requirements of ISO 9001:2015. The Swagelok Company maintains BSI Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Swagelok FX series hose assemblies are manufactured at Hose Master and at Swagelok Company location in Solon, Ohio.

References

The product catalog does not represent the full scope of the registration but rather details some of the most common options.

Hose Assemblies, Bulk Hose, and End Connections Product Catalog MS-01-180





Attachment A. Swagelok Manufacturing Locations

This document lists the Swagelok locations where end item or component level manufacturing activities take place.

Swagelok Company 29500 Solon Road Solon, Ohio 44139 USA		Swagelok Company (Falon 1) 348 Bishop Road Highland Heights, Ohio 44143 USA			
Swagelok Company (318 Bishop Road Highland Heights, Oh USA		Swagelok Company (Falon 2) 358 Bishop Road Highland Heights, Ohio 44143 USA			
Swagelok Company (29495 F.A. Lennon Di Solon, Ohio 44139 USA		Swagelok Company (HPF) 6050 Cochran Road Solon, Ohio 44139 USA			
Swagelok Company (A 26651 Curtiss Wright Willoughby Hills, Ohio USA	Parkway	Swagelok Company (Snow Metal) 6060 Cochran Road Solon, Ohio 44139 USA			
Swagelok Company (I 26653 Curtiss Wright Willoughby Hills, Ohio USA	Parkway	Swagelok Company (Alfred) 29500 Ambina Drive Solon, Ohio 44139			
Swagelok Hose Service 29900 Solon Industrial Solon, Ohio 44139		Swagelok Company (Strongsville) 15400 Foltz Road Strongsville, Ohio 44119			
Swagelok (China) Flui Changshu Export Prod Changshu Economic I Changshu, Jiangshu 215513 China		Swagelok Company A.G. (European Technology Center) St. GallerstrasBe 84 Lachen, Switzerland 8853 Switzerland			
Swagelok Limited Ballafletcher Road Tromode IM4 4RA Isle of Man	(1) = 10	56			
TOTAL ST. ITION	ATTACHMENT TO C.R.N. C.S.A O.D.L.O.L.S. Signed: O.L. S. Signed: O. S.	2.16 THIS IS PART OF CRN ODZOSZZS			