

STATUTORY DECLARATION
Registration of Fittings

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

Swagelok

I, David H. Peace, Vice President of Engineering
(name of applicant) (position title) (must be in a position of authority)
of Swagelok Company
(name of manufacturer)

located at 29500 Solon Road, Solon, Ohio 44139 USA (see Attachment A)
(plant address)

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

- [X] comply with the requirements of ASME B31.3 which specifies the dimensions, (title of recognized North American Standard) 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 (title of code of construction or other applicable document) 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, BSI 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

Category D Type Fittings (Hoses)
(brief description of fittings)

In support of this application, the following information, calculations and/or test data are attached:
ISO 9001:2015 Certificate, Swagelok Hose Catalog Information, Attachment A, Attachment B, and other supporting documents

DECLARED before me at Solon in the State of Ohio
(city) (province or state)
this 13th day of November, 2017
(Month) (Year)

(print) Jamie L. Ristau Jamie L. Ristau
(a Commissioner of Oaths or Notary Public) Resident Portage County
Notary Public, State of Ohio
My Commission Expires: 03/08/2018
(sign) Jamie L. Ristau
(a Commissioner of Oaths or Notary Public)

(signature of applicant)

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 D

Registration Number: 0D20522-52
(Signature of the Administrator/SCA)

Date Registered: SEP 13 2018 Expiry Date: July 11, 2028

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 Construction
				@ Min. Temp.	@ Max. Temp.	
FX Series Metal Hose	<p>Core: 316L SS (ASTM A240)</p> <p>Braid: 321 SS (ASTM A478) Or 316L SS (ASTM A240)</p> <p>Weld Collar: 304 SS (ASTM A269)</p> <p>End Connections: Strain-Hardened 316 SS (ASTM A479)</p>	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	
		Male Swivel Nut VCR 1/4" [RM] Female VCR Fitting 1/4" [RF]		5500 @ -325°F	3883 @ 1000°F	
		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 1/2" [PF]		4900 @ -60°F	4606 @ 400°F	
		Tube Butt Weld 1/2" [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	

ASCA

SAFETY CODES ACT - PROVINCE OF ALBERTA
REGISTRATION OF FITTINGS

REGISTRATION NO. DD 20522-52

DWG. NO. or CRN NO. Scope of Registration (5 pages)

TYPE OF FITTINGS Swagelok FX Series Metal Hoses

SEP 13 2018 INITIALS TAO

Date SEP 13 2018 TAO TANG, P.Eng.
DESIGN SURVEY ENGINEER

Product Series	Pressure Retaining Material	End Connection & Sizes	Nom. Hose Size (in.)	Maximum Working Pressure in (Psig)		Design Code of Construction		
				@ Min. Temp.	@ Max. Temp.			
FX Series Metal Hose	<p>Core: 316L SS (ASTM A240)</p> <p>Braid: 321 SS (ASTM A478) or 316L SS (ASTM A240)</p> <p>Weld Collar: 304 SS (ASTM A269)</p> <p>End Connections: Strain-Hardened 316 SS (ASTM A479)</p>	Tube Fitting 1/4" – 1/2", 4-12 mm [TA, TM, SL, SM] Female VCO Fitting 1/2" [VF] Male Swivel Nut VCR 1/4" [RM] Female VCR Fitting 1/4" [RF]	3/8	5000 @ -325°F	3530 @ 1000°F	ASME B31.3, ISO 10380		
		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]		5000 @ -60°F	4700 @ 400°F			
		NPT Female 1/2" [PF]		4900 @ -60°F	4606 @ 400°F			
		Tube Butt Weld 1/2" [TB]		3700 @ -325°F	2612 @ 1000°F			
		Tube Butt Weld 3/8" [TB]	3300 @ -325°F	2329 @ 1000°F				
		Male Swivel Nut VCR 1/2" [RM] Female VCR Fitting 1/2" [RF]	3000 @ -325°F	2118 @ 1000°F				
		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]		4500 @ -60°F	4230 @ 400°F			
		Female ISO/BSP Tapered Threads (ISO 7) 1/2" [FT]		4400 @ -60°F	4092 @ 400°F			
		NPT Female 1" [PF]						
		Tube Butt Weld 1/2" [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
		Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RF]		2800 @ -325°F	1976 @ 1000°F			

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Product Series	Pressure Retaining Material	End Connection & Sizes	Nom. Hose Size (in.)	Maximum Working Pressure in (Psig)		Design Code of Construction
				@ Min. Temp.	@ Max. Temp.	
FX Series Metal Hose	<p>Core: 316L SS (ASTM A240)</p> <p>Braid: 321 SS (ASTM A478) Or 316L SS (ASTM A240)</p> <p>Weld Collar: 304 SS (ASTM A269)</p> <p>End Connections: Strain-Hardened 316 SS (ASTM A479)</p>	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 Threads (ISO 7) 3/4"-1" [FT]		3600 @ -60°F	3384 @ 400°F	
		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	
		Tube Butt Weld 3/4"-1" [TB]	2400 @ -325°F	1694 @ 1000°F		
		Tube Fitting 1/2" – 1-1/4", 16-28 mm [TA, TM, SL, SM] Male Swivel 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	

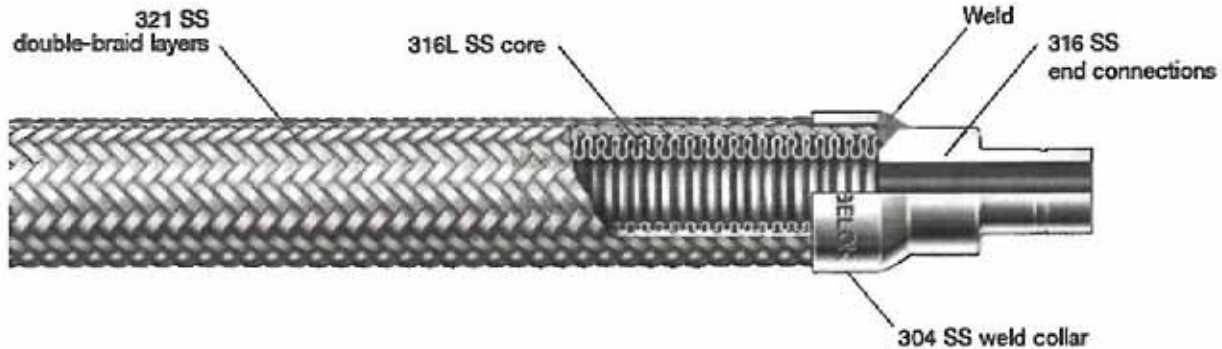
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Product Series	Pressure Retaining Material	End Connection & Sizes	Nominal Hose Size (in.)	Maximum Working Pressure in (Psig)		Design Code of Construction
				@ Min. Temp.	@ Max. Temp.	
FX Series Metal Hose	<p>Core: 316L SS (ASTM A240)</p> <p>Braid: 321 SS (ASTM A478) or 316L SS (ASTM A240)</p> <p>Weld Collar: 304 SS (ASTM A269)</p> <p>End Connections: Strain-Hardened 316 SS (ASTM A479)</p>	Tube Fitting 1-1/4" – 1-1/2", 28-32 mm [TA, TM, SL, SM]	1-1/4	2600 @ -325°F	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	
		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	
		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	
		Tube Fitting 2" [TA, SL] Tube Butt Weld 2" [TB]		2	1675 @ -325°F	
NPT Male 1-1/2" – 2" [PM] Male ISO/BSP Tapered threads (ISO 7) 2" [MT]	1675 @ -60°F	1574 @ 400°F				

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Product Illustration

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



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

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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 (Highland) 318 Bishop Road Highland Heights, Ohio 44143 USA	Swagelok Company (Falon 2) 358 Bishop Road Highland Heights, Ohio 44143 USA
Swagelok Company (OFC) 29495 F.A. Lennon Drive Solon, Ohio 44139 USA	Swagelok Company (HPF) 6050 Cochran Road Solon, Ohio 44139 USA
Swagelok Company (Atlantic) 26651 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Snow Metal) 6060 Cochran Road Solon, Ohio 44139 USA
Swagelok Company (Micro) 26653 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Alfred) 29500 Ambina Drive Solon, Ohio 44139
Swagelok Hose Services Company (SHSC) 29900 Solon Industrial Parkway Solon, Ohio 44139	Swagelok Company (Strongsville) 15400 Foltz Road Strongsville, Ohio 44119
Swagelok (China) Fluid System Technologies Ltd. Changshu Export Process Zone Changshu Economic Development Zone 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	0020522-52