UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK NUNAVUT

NOVA SCOTIA YUKON

PRINCE EDWARD ISLAND NORTHWEST TERRITORIES

NEWFOUNDLAND AND LABRADOR

MANUFACTURERS NAME: Swagclok Company MANUFACTURERS ADDRESS: 00 50 70 70 70 70 70 70 70 70 70 70 70 70 70	
MANUFACTURERS ADDRESS: 29500 Solon Road, Solon, Ohio 4 PLANT LOCATIONS: Headquarters: 29500 Solon Road, Solon, O CATEGORY OF FITTINGS TO BE REGISTERED, CIRCLE ONE	4139 USA
CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE	hio 44139 USA (See Attachment A)
A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe cap B Flanges all flanges C Valves: all line valves Expansion joints, flexible connections, and hose assemblies: all types E Strainers, filters, separators, and steam traps F Measuring devices, including pressure gauges, level gauges, sight glasses pressure transmitters G Certified capacity-rated pressure relief devices acceptable as primary over boilers, pressure vessels, piping and fusible plugs H Pressure retaining components that do not fall into one of the above category.	ASME B31.3 for unlisted components and ISO 10380 s, levels, or ressure protection on
N Nuclear components. Class 1 □ Class 2 □ Class 3 □, (Meeting AECB	or ASME requirements)
SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL A SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL A	FORGED WELDED WROUGHT CAST OTHER X DESCRIBE OTHER
LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE	ACTUAL ITEMS TO BE REGISTERED:
DECLARATION: Joel Feldman, Vice President, Engineering (1800 note 3) employed by Swageld responsibility for the quality of the end product do solemnly declare that my knowledge represents the product for which registration is sought, temperature ratings, and identification markings are in accordance with manufacture of these fittings is regulated by a Quality Control Program or in part and has been verified by BSI	the dimensions, materials of construction, pressure in the herein named standards. I further declare that the which extends to each plant where fabrication occurs in whole
declaration conscientiously believing it to be true, and knowing that it is Signature of Declarer.	
This 31 day of JANUARY AD 2023	JEFFREY C. TRUMBULL Notary Public P A Cythe of Othor T H E Recorded in Lake County Certificate \$2020-HE-813693
Commissioner of Oaths or Notary Public: (sign) Affix Official seal to the right)	My Commission Expires April 15, 2025
This registration must be revalidated after ten	My Commission Expires April 15, 2025



THIS IS PART OF CRN 0D20522.5ADD1

Technical Standards and Safety Authority

Boilers and Pressure Vessels Safety

Program

Rev: June 9, 2022 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 Pressure Retaining		End Connection & Sizes	Nom. Hose Size	Maximum Working Pressure in (Psig)		Design Code of
301100	Material		(in.)	@ Min. Temp.	@ Max. Temp.	Construction
	<u>Core:</u>	Tube Fitting 1/4" – 1/2", 4-10 mm [TA, TM, SL, SM] NPT Female 1/8" – 1/4" [PF]		6000 @ -325°F	4236 @ 1000°F	
	316L SS (ASTM A240) Braid: 321 SS (ASTM A580) Or 316L SS (ASTM A580) Or 316L SS (ASTM A240) Weld Collar: 304 SS (ASTM A269) End Connections: Strain- Hardened 316 SS (ASTM A479)	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]	1/4	6000 @ -60°F	5640 @ 400°F	
Series Metal		Male Swivel Nut VCR ¼" [RM] Female VCR Fitting ¼" [RF]		5500 @ -325°F	3883 @ 1000°F	ASME
		Tube Fitting 12mm [TM]		5365 @ -325°F	3787 @ 1000°F	B31.3, ISO 10380
		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	



Rev: June 9, 2022 Page 2 of 5

Product Series	Pressure Retaining Material	End Connection & Sizes	Nom. Hose Size (in.)	Pres in (F @ Min.	working sure Psig) @ Max. Temp.	Design Code of Construction
		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] 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] NPT Female 1/2" [PF] Tube Butt Weld 1/2" [TB] Tube Butt Weld 3/8" [TB] 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 VCO Fitting 1/2" [VF] NPT Female 3/8-1/2" [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]		4400 @ -60°F	4092 @ 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	
		Male Swivel Nut VCR 3/4" [RM] Female VCR Fitting 3/4" [RF]		2800 @ -325°F	1976 @ 1000°F	

THIS IS PART OF CRN

0D20522.5ADD1

Technical Standards and Safety Authority **Boilers and Pressure Vessels Safety** Program



Canadian Registration Number Submittal

	gistiation Numbe					Page 3 of 5
Product Series	Pressure Retaining Material	End Connection & Sizes	Nom. Hose Size (in.)	Pres in (F @ Min.	Working sure Psig) @ Max.	Design Code of Construction
		T. I. 5''' 4 /0" 4" 40 00	()	Temp.	Temp.	
		Tube Fitting 1/2" – 1", 12-20 mm [TA, TM, SL, SM] Female VCO Fitting 1/2" – 3/4" [VF]		3600 @ -325°F	2541 @ 1000°F	
	Core: 316L SS FA Series Metal Hose Fad Connections: Strain-Hardened 316 SS (ASTM A479) FA Metal Connections: FA Series Metal Hose Metal Tardened 316 Tardened 316 Tardened 316 SS (ASTM A479) FA Tardened 316 T	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]	3/4	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	
Series		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]		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]	1	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	

THIS IS PART OF CRN

Rev: June 9, 2022

0D20522.5ADD1

Technical Standards and Safety Authority Boilers and Pressure Vessels Safety Program



Rev: June 9, 2022 Page 4 of 5

THIS IS PART OF CRN

Technical Standards and Safety Authority

0D20522.5ADD1

Product Series	Pressure Retaining Material	End Connection & Sizes	Nominal Hose Size (in.)	Pres	Working sure Psig) @ Max. Temp.	Design Code of Construction
	<u>Core:</u> 316L SS	Tube Fitting 1-1/4" – 1-1/2", 28- 32 mm [TA, TM, SL, SM]		2600 @ -325°F	1835 @ 1000°F	
	(ASTM A240) Braid: 321 SS	NPT Female 1-1/4" [PF] NPT Male 1" – 1-1/4" [PM] Male ISO/BSP Tapered threads (ISO 7) 1-1/4" [MT]	1-1/4	2600 @ -60°F	2444 @ 400°F	
(ASTM A580 or		Tube Butt Weld 1-1/4" [TB]		2400 @ -325°F	1694 @ 1000°F	
FX Series Metal	316L SS (ASTM A240)	Tube Fitting 1-1/2", 38 mm [TA, TM, SL, SM] Tube Butt Weld 1-1/2" [TB]		2200 @ -325°F	1553 @ 1000°F	ASME B31.3, ISO 10380
Hose	(ASTM A269) End Connections: Strain-	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]	1-1/2	2200 @ -60°F	2068 @ 400°F	
		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.

Boilers and Pressure Vessels Safety Program 321 SS Weld double-braid layers 316L SS core 316 SS end connections 304 SS weld collar



Canadian Registration Number Submittal

Rev: June 9, 2022 Page 5 of 5

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

THIS IS PART OF CRN

0D20522.5ADD1

Technical Standards and Safety Authority

Boilers and Pressure Vessels Safety

Program

Attachment A. Swagelok Manufacturing Locations

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

THIS IS PART OF CRN 0D20522.5ADD1

Swagelok Company 29500 Solon Road Solon, Ohio 44139 USA	Swagelok Company (Falon 1) 348 Bishop Road Highland Heights USA Technical Standards and Safety Authority Policy Standards and Safety Authority Policy Standards and Safety Authority Program Ohio 44143 Program
Swagelok Company (Highland)	Swagelok Company (Falon 2)
318 Bishop Road	358 Bishop Road
Highland Heights, Ohio 44143	Highland Heights, Ohio 44143
USA	USA
Swagelok Company (OFC)	Swagelok Company (HPF)
29495 F.A. Lennon Drive	6050 Cochran Road
Solon, Ohio 44139	Solon, Ohio 44139
USA	USA
Swagelok Company (Atlantic)	Swagelok Company (Snow Metal)
26651 Curtiss Wright Parkway	6060 Cochran Road
Willoughby Hills, Ohio 44092	Solon, Ohio 44139
USA	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)	Swagelok Company (Strongsville)
29900 Solon Industrial Parkway	15400 Foltz Road
Solon, Ohio 44139	Strongsville, Ohio 44119
Swagelok (China) Fluid System Technologies Ltd. Changshu Export Process Zone Changshu Economic Development Zone Changshu, Jiangshu 215513 China	Swagelok Limited Ballafletcher Road Tromode IM4 4RA Isle of Man