


FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK  
NEW JERSEY

NOVA SCOTIA  
CANADA

PRINCE EDWARD ISLAND  
CANADA

VERMONT AND LABRADOR

MANUFACTURERS NAME: <u>Swagelok Company</u>	
MANUFACTURERS ADDRESS: <u>29500 Solon Road, Solon, Ohio 44139 USA</u>	
PLANT LOCATION: <u>Headquarters: 29500 Solon Road, Solon, Ohio 44139 USA (See Attachment A)</u>	
CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY	
A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers B Flanges: all flanges C Valves: all line valves D 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, levels, or pressure transmitters G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs H Pressure retaining components that do not fall into one of the above categories N Nuclear-components: Class 1 <input type="checkbox"/> Class 2 <input type="checkbox"/> Class 3 <input type="checkbox"/> (Meeting AECB or ASME requirements)	TITLE OF THE STANDARD OF CONSTRUCTION  <b>Rubber Products Manufacturers (ARPM) Hose Handbook, ASME B31.1 for unlisted components, ASME B31.3 for unlisted components</b>
SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT	TYPE OF CONSTRUCTION
	FORGED <input type="checkbox"/> WELDED <input type="checkbox"/> WROUGHT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> DESCRIBE OTHER: <b>316SS bar for hose connector fittings, PTFE core for hose</b>
LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:	
<u>ISO 9001:2015 Certificate, Attachment A, Attachment B, Catalog Information and other Support Documents</u>	

DECLARATION:

I, Joel Feldman, Vice President, Engineering (see note 3) employed by Swagelok Company and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by BST as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [Signature] 3/8/2022 | 10:48 AM EST

Declared before me at Unable to get a notary  
 This AD day of signature or seal due to  
 Commissioner of Oaths or Notary Public: (sign) COVID-19 situation  
 (Affix Official seal to the right)


USE THIS SPACE FOR THE OFFICIAL SEAL

This space for Regulatory Authority use

This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: 0D22748.5A8d1  
 FID#: 1214

Notes:  
 1. All fittings shall be registered in the name of the Manufacturer.  
 2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.  
 3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product.  
 4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.



BOILER & PRESSURE VESSEL  
 NOVA SCOTIA  
 Date June 24/22  
 CRN 0D22748.5A8D1  
 Des. as described  
 Signed Yvonne Perry  
 1 of 1  
 Part  
 ACT & REGULATIONS



**Attachment B: Scope of Registration for Crimped Swagelok X Series PTFE Hose Assemblies (Category D)**

This document represents the scope of the Swagelok Coreflex XC and XT hose (X Series) and crimped assemblies covered by this submission for CRN approval. These products have been evaluated in accordance with the Association for Rubber Products Manufacturers (ARPM) Hose Handbook.

**Summary Table**

Table 1a – X series hose with fittings other than KC/KE (Kwik Clamp™) fittings						
X Series Hose Size	Maximum Pressure (psig)			Pressure Retaining Material	End Connections and Sizes	Design Code of Construction
	At Minimum Temp. (-65°F)	Room temperature (0°-100°F)	At Maximum Temp. (450°F)			
1/4"	3500	3500	3075	<b>Core</b> Smooth bore PTFE (XT Series) OR Smooth bore carbon black filled PTFE (XC Series)	Swagelok Tube Fitting <b>[SL, SM]</b> 1/8" – 2" (3-50mm)	Association for Rubber Products Manufacturers (ARPM) Hose Handbook
3/8"	3000	3000	1675		Male & Female NPT Tapered Pipe Fitting <b>[PM, PF]</b> 1/8" – 2"	
1/2"	1800	1800	1665	<b>Braid</b> Fiber braid reinforcement AND 304 SS Braid Reinforcement	Male & Female ISO/BSP Tapered (ISO 7) Pipe Threads <b>[MT, FT]</b> 1/4" – 1"	
3/4"	1250	1250	900		Male 37° JIC & Female 37° JIC with female swivel nut <b>[AN, AS]</b> 1/4" – 2"	
1"	1000	1000	895	<b>End Connections</b> 316 SS  <b>Crimp on Collar</b> 300 series SS	Tube Butt Welds <b>[TB]</b> 1/2" – 1"  Female VCO O-ring Face seal Fitting <b>[VF]</b> 1/8" – 2"  Female VCR Metal Gasket Face seal Fitting <b>[RF]</b> 1/8" – 2"  Male ISO/BSP Parallel Threads W/ 60° Male cone (ISO 228) <b>[MS]</b> 1/4" – 1"  Female ISO/BSP Parallel Threads (ISO 228) <b>[FS]</b> 1/4" – 1"	

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Table 1b – X series hose with KC/KE (Kwik Clamp™) fittings*						
X Hose Size	Maximum Pressure (psig)*			Pressure Retaining Material	End Connections and Sizes	Design Code of Construction
	At Min. Temp. (-65°F)	At Room temperature (0° – 100°F)	At Max. Temp. (250°F)			
1/4"	1500	1500	1500	Same as above	Sanitary [KC KE] 1/2"	ARPM Hose Handbook  For KC/KE fitting: ASME B31.3 (Unlisted Components)  ASME B31.1 (Unlisted Components)
3/8"	1500	1500	1500			
1/2"	1500	1500	1500			
3/8"	1500	1500	1500	Same as above	Sanitary [KC KE] 3/4"	
1/2"	1500	1500	1500			
3/4"	1250	1250	1100			
1/2"	225	225	225	Same as above	Sanitary [KC KE] 1"	
3/4"	225	225	225			
1"	225	225	225			
3/4"	400	400	400	Same as above	Sanitary [KC KE] 1-1/2"	
1"	400	400	400			

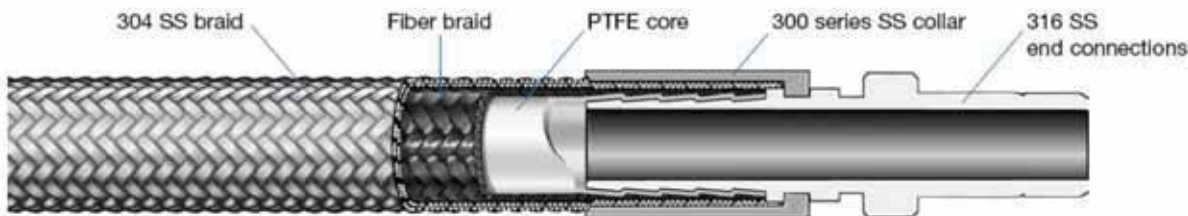
\* Temperature and pressure ratings limited by sanitary Kwik Clamp™ gaskets and clamps

**Product Description**

XT series is standard Swagelok virgin PTFE-lined hose with a fiber braid reinforcement and 304 stainless steel reinforcement with a silicone cover. The XC series consist of the same construction but has Swagelok carbon black filled virgin PTFE liner. The 1 inch nominal ID hose for both XT and XC series is constructed with two stainless steel braids and no fiber braid. All X Series hoses undergo production testing in accordance with ASTM D380 "Test Methods for Rubber Hose" (version current to hose production date).

**Configurations**

All end connection inserts are crimped onto the hose using crimp collars.



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 Technical Standards and Safety Authority  
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**Product Options:**

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

**Cover Options**

- Armor guard - Interlocking, flexible 302 stainless steel.
- Fire jacket - Woven fiberglass coated with specially compounded aerospace-grade silicone rubber
- Spiral guard - Helical HDPE plastic

**Tag and Marking Options**

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

**End Connection Seals or Sealants Options**

- VCO – O-rings
- 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.

**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.

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## Attachment A. Swagelok Manufacturing Locations

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

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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 Limited Ballafletcher Road Tromode IM4 4RA Isle of Man