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[www.firecomm.gov.mb.ca/codes\\_steam\\_pressure.html](http://www.firecomm.gov.mb.ca/codes_steam_pressure.html)

March 8, 2016

TSSA  
3300 Bloor St. W, Center Tower, 14<sup>th</sup> Floor  
Toronto, ON  
M8X 2X4

Attn: Tanya Francis

### REGISTRATION OF VALVES AND FITTINGS

**Manufacturer:** Swagelok Company

The design(s) for the following Valves/Fittings has been received by us and has been examined and accepted for registration in the Province of Manitoba as follows.

DRAWING / CATALOGUE	CRN	FILE
Coreflex W Series - See Attachment B Rev. B	0D14205.54	36220

**An invoice covering survey and registration fees is enclosed.**

*NOTE: CRN registered under reciprocal agreement & is conditional based on compliance with the notes set by the original issuing Jurisdiction: TSSA. See attached stamped "this is part of CRN" for scope of registration. This registration expires December 21, 2025.*

This registration is valid until the indicated expiry date only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date. Should the approval of the quality management system lapse before the expiry date indicated above, this registration shall become void.

The registration of this design does not relieve the manufacturer, the owner or his agent of the responsibility for the design or construction of a fitting in accordance with the applicable Acts, Codes and Standards. Inspection and Technical Services assumes no responsibility by registering designs, examining plans and/or inspecting equipment or facility.

Yours truly,

**Rabie Harb, E.I.T.**

Design Surveyor  
Office of the Fire Commissioner  
Inspection and Technical Services Manitoba  
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TECHNICAL STANDARDS &  
SAFETY AUTHORITY  
14th Floor, Centre Tower  
3300 Bloor Street West  
Toronto, Ontario  
Canada M8X 2X4

Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below

Swagelok

## STATUTORY DECLARATION Registration of Fittings

I, David H. Peace, Vice President of Engineering  
(Name and Position, e.g. President, Plant Manager, Chief Engineer)

of Swagelok Company  
(Name of Manufacturer)

Located at 29500 Solon Road, Solon, Ohio 44139-3492 (Plant Address) (440) 248-4600 (Telephone No.) 440-519-7384 (Fax No.)

do solemnly declare that the fittings listed hereunder, which are subject to the *Technical Standards and Safety Act*, Boilers and Pressure Vessels Regulation, comply with all of the requirements of The RMA Handbook  
(Title of recognized North American Standard)  
which specifies the dimensions, materials of construction, pressure/temperature ratings, identification marking the fittings and service;

or are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with \_\_\_\_\_ as supported by the attached data which identifies the dimensions, material of construction, pressure/temperature ratings and the basis for such ratings, the marking of the fitting for identification and service.

I further declare that the manufacture of these fittings is controlled by a quality system meeting the requirements of ISO 9001:2008 which has been verified by the following authority, The British Standards Institution

The items covered by this declaration, for which I seek registration, are category D type fittings. In support of this application, the following information and/or test data are attached as follows:  
ISO 9001:2008 Certificate, Catalog Information, Support Documents, Attachments A, B, C, D, E  
(drawings, calculations, test reports, etc.)

Declared before me at Solon in the State of Ohio  
the 30 day of January AD 2014

Commissioner for Oaths:

Lori A. Server  
(Printed name) Lori A. Server, Notary Public  
State of Ohio, Summit County  
My Commission Expires April 13, 2015  
[Signature] (Signature) [Signature] (Signature of Declarer)

### FOR OFFICE USE ONLY

To the best of my knowledge and belief, the application meets the requirements of the *Technical Standards and Safety Act*, Boilers and Pressure Vessels Regulation, and CSA Standard B51 and is accepted for registration in Category "D"

CRN: 0D14205.54  
Registered by: [Signature]  
Dated: 2016/03/10

Registration of  
Industrial Services  
Authority

Office of the Registrar  
of the Registrar

REGISTERED

CRN: 0D14205.54  
Signed: [Signature]  
Date: 2016/03/10

NOTE: This registration expires on: Dec 21, 2025

## Attachment B. Scope of Registration for Swagelok Coreflex PTFE (WC) Hose Assemblies (Category D)

### Product Scope

This document represents the scope of Swagelok Coreflex WC PTFE Hose Assemblies covered by this submission for CRN approval. These Swagelok Coreflex WC PTFE Hose Assemblies have been evaluated in accordance with the Rubber Manufacturer's Association (RMA) Handbook and ASTM D380 Test Methods for Rubber Hose.

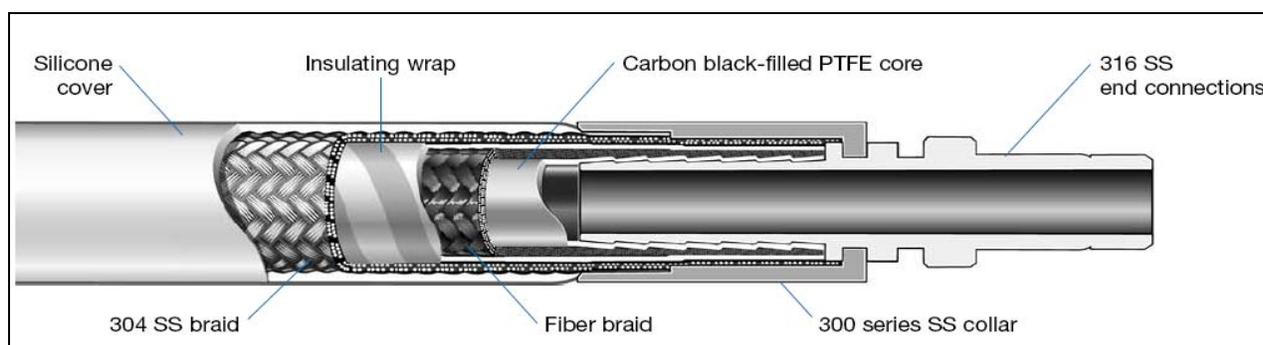
### Summary Table

Product Description or Series	Pressure Retaining Material	End Connection & Sizes	Nom. Hose Size (in.)	Maximum Working Pressure in (Psig)		Design Code of Construction
				@ Min. -65°F	@ Max. 450°F	
<b>W Series</b>	<p><b>Core:</b> Carbon Black-filled (PTFE) [WC]</p> <p><b>Covered by:</b> Fiber Braid &amp; Insulating Wrap &amp; 304 Series Stainless Steel Braid &amp; Silicon Cover</p> <p><b>With:</b> Annealed 316 Stainless Steel End Connections OR 316 Strain Hardened End Connections OR 316L Stain Hardened Stainless Steel End Connections &amp; 304L Stainless Steel Crimp on Collar</p>	Swagelok Tube Fitting: 1/8" to 2" & 3, 6,10,12,18,25,38,50 mm  Swagelok Tube Adapters:1/8" to 2" & 3, 6,10,12,18,25,38,50 mm  Female Pipe Threads NPT:1/8" to 2"	3/8"	750	750	Rubber Manufacturers Association Handbook
		Male Pipe Threads NPT: 1/8" to 2"  Tube Stubs: 1/8" to 2" & 3, 6,8,10,12,18,25, 38, 50 mm  *Sanitary Kwik –Clamps: 1/2" to 2"  Tube Butt Welds: 1/2" to 2"  Female VCO O-ring Face Seal Fitting: 1/8" to 2"	1/2"	750	750	
		Female VCR Metal Gasket Face seal Fitting: 1/8" to 2"  *TS series Sanitary Clamps: 1/2" to 1"  Male Pipe threads, ISO/BSP Tapered (ISO 7): 1/4" to 1"  Male ISO/BSP Parallel Threads W/ 60° Male cone (ISO 228): 1/4" to 1"  Female Pipe Threads, ISO/BSP Tapered (ISO 7): 1/4" to 1"  Female ISO/BSP Parallel Threads (ISO 228): 1/4" to 1"  Female Swivel ISO/BSP Parallel Threads W/ 30° Cone: 1/4" to 1/2"  Female Swivel ISO/BSP Parallel Threads W/ 60° Cone:1/4" to 1/2"	3/4"	500	500	

Working Pressure for W Series PTFE Hose (WC Series)						
Hose Size (in)		Temperature in (°F)				
		-65 to 100	200	300	400	450
3/8"	Max. Working Pressure (PSIG)	750	750	750	750	750
1/2"	Max. Working Pressure (PSIG)	750	750	750	750	750
3/4"	Max. Working Pressure (PSIG)	500	500	500	500	500

## **Product Illustration**

WC series is standard Swagelok virgin PTFE-lined hose with fiber braid reinforcement, ceramic wrap insulation, 304 stainless steel reinforcement, and a silicone cover. All end connection inserts are crimped onto the hose using crimp collars.



## **Typical Product Characteristics**

Some of the product options listed below do not affect the pressure-temperature ratings shown in the Summary Table. All of the following options are within the scope of this registration:

### **Cover Options**

- Armor guard - Interlocking, flexible 304 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
- Perma tag - Polyester tag encapsulated in platinum-cured silicone 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
- Flange and Sanitary Ends - gaskets

All of the above options are within the scope of this approval.

## **Quality System**

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Swagelok Coreflex PTFE Hose Assemblies (WC) are manufactured at a 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 R8