Alberta Municipal Affairs

ABSA
the pressure equipment safety authority

AB-41 2016-01

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, Joel Feldman (name of applicant), Vice President, Engineering (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)

☒ comply with the requirements of ASME B31.3 (title of recognized North American Standard) which specifies the dimensions, 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 (brief description of fittings)

In support of this application, the following information, calculations and/or test data are attached:

**

ISO 9001:2015 Certificate, Attachment A, Attachment B, Catalog Information and other Support Documents

DECLARED before me at _____ (city) in the _____ of _____ (province or state)

this _____ day of _____ (Month), _____ (Ye

(print) _____ (a Commissioner of Oaths or Notary Public)

Unable to get a notary signature or seal due to COVID-19 situation

DocuSigned by:

(sign) _____ (a Commissioner of Oaths or Notary Public)

2/10/2021 | 7:27 AM EST

C87CBBFFD3F14B7...

For ABSA Office Use Only:

NOTES: ** FJ series hose assemblies

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 _____

Registration Number: _____ _____ (Signature of the Administrator/SCO)

Date Registered: _____ Expiry Date: _____

2021-03182
ABSA
SAFETY CODES ACT - PROVINCE OF ALBERTA
ACCEPTED: 0D20616.52
See acceptance letter for conditions of registration.
Date: 2021-06-25 By:
ASHLING DICK, P. Eng.

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Pressure Equipment Discipline.

This stamp and signature have been affixed electronically to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance with the Electronic Transactions Act.

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

Product Scope

The table below represents the scope of Swagelok FJ series hose assemblies covered by this submission for CRN approval. These hose assemblies are assembled by Hose Master LLC and at the Swagelok Company locations in Solon, Ohio and have been evaluated in accordance with ASME B31.3 and ISO 10380. The referenced product catalog(s) do not represent the full scope of the submission but rather detail some of the most common options.

Summary Table

Product Series and Size (in)	Pressure Retaining Material (Standard)	Port Connections	Port Connection Sizes	Maximum Working Pressure (psig)		Design Code of Construction
				At Min Temp (-325°F to 100°F)	At Max Temp (800°F)	
FJ Series Metal Hose- **1/4"**	Core 316/316L SS (ASTM A240) Braid 304 SS or 316L SS (ASTM A478) Weld Collar 304/304L SS (ASTM A269) or 316/316L SS (ASTM A269) End Connections 316/316L SS (ASTM A479)	Swagelok Tube Fitting **[TA TM SL SM]**	1/8" - 1/2" 3mm - 12mm	1600	1184	ASME B31.3 ISO 10380
		Female and Male VCR Metal Gasket Face seal Fitting **[RF RM]**	1/8" - 1/2"	1600	1184	
		Male High Flow VCR Metal Gasket Face seal Fitting **[HRM]**	1/4"	1600	1184	
		Female and Male VCO O-ring Face seal Fitting **[VF VM]**	1/8" - 1/2"	1600 (1)	1336 @550°F (1)	
		Female 37° JIC and male 37° JIC with female swivel nut **[AN AS]**	1/8" - 1/2"	1600	1184	
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	1/8" - 1/2"	1600 (2)	1432 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	1/8" - 1/2"	1600 (2)	1432 @450°F (2)	
		Tube Butt Welds **[TB MTB]**	1/8" - 1/2" 6mm - 12mm	1600	1184	
		Female ISO/BSP Parallel Threads (ISO 228) **[FS]**	1/4" - 1/2"	1600	1488 @400°F (1)	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	1/8" - 1/2"	1600 (1)	1488 @400°F (1)	

(1) Temperature and/or pressure ratings are determined by gasket or O-ring materials. Refer to Swagelok catalog MS-01-147 for ratings.

(2) Temperature and/or pressure ratings are determined by pipe thread sealant type. Refer to Swagelok catalog MS-01-91 for ratings.

Product Series and Size (in)	Pressure Retaining Material (Standard)	Port Connections	Port Connection Sizes	Maximum Working Pressure (psig)		Design Code of Construction
				At Min Temp (-325°F to 100°F)	At Max Temp (800°F)	
FJ Series Metal Hose- **3/8"**	Core 316/316L SS (ASTM A240) Braid 304 SS or 316L SS (ASTM A478) Weld Collar 304/304L SS (ASTM A269) or 316/316L SS (ASTM A269) End Connections 316/316L SS (ASTM A479)	Swagelok Tube Fitting **[TA TM SL SM]**	1/4" - 3/4" 6mm - 18mm	1470	1088	ASME B31.3 ISO 10380
		Female and Male VCR Metal Gasket Face seal Fitting **[RF RM]**	1/4" - 3/4"	1470	1088	
		Female and Male VCO O-ring Face seal Fitting **[VF VM]**	1/4" - 3/4"	1470 (1)	1227 @550°F (1)	
		Female 37° JIC and male 37° JIC with female swivel nut **[AN AS]**	1/4" - 3/4"	1470	1088	
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	1/4" - 3/4"	1470 (2)	1315 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	1/4" - 3/4"	1470 (2)	1315 @450°F (2)	
		Tube Butt Welds **[TB MTB]**	1/4" - 3/4" 6mm - 18mm	1470	1088	
		Female ISO/BSP Parallel Threads (ISO 228) **[FS]**	1/4" - 1/2"	1470	1367 @400°F (1)	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	1/4" - 3/4"	1470 (1)	1367 @400°F (1)	

(1) Temperature and/or pressure ratings are determined by gasket or O-ring materials. Refer to Swagelok catalog MS-01-147 for ratings.

(2) Temperature and/or pressure ratings are determined by pipe thread sealant type. Refer to Swagelok catalog MS-01-91 for ratings.

Product Series and Size (in)	Pressure Retaining Material (Standard)	Port Connections	Port Connection Sizes	Maximum Working Pressure (psig)		Design Code of Construction
				At Min Temp (-325°F to 100°F)	At Max Temp (800°F)	
FJ Series Metal Hose- **1/2"**	<u>Core</u> 316/316L SS (ASTM A240) <u>Braid</u> 304 SS or 316L SS (ASTM A478) <u>Weld Collar</u> 304/304L SS (ASTM A269) or 316/316L SS (ASTM A269) <u>End Connections</u> 316/316L SS (ASTM A479)	Swagelok Tube Fitting **[TA TM SL SM]**	3/8" - 1" 10mm - 25mm	1110	821	ASME B31.3 ISO 10380
		Female and Male VCR Metal Gasket Face seal Fitting **[RF RM]**	3/8" - 1"	1110	821	
		Female and Male VCO O-ring Face seal Fitting **[VF VM]**	3/8" - 1"	1110 (1)	927 @550°F (1)	
		Female 37° JIC and male 37° JIC with female swivel nut **[AN AS]**	3/8" - 1"	1110	821	
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	3/8" - 1"	1110 (2)	993 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	3/8" - 1"	1110 (2)	993 @450°F (2)	
		Tube Butt Welds **[TB MTB]**	3/8" - 1" 10mm - 25mm	1110	821	
		Female ISO/BSP Parallel Threads (ISO 228) **[FS]**	3/8"-1/2”	1110	1032 @400°F (1)	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	3/8" - 1"	1110 (1)	1032 @400°F (1)	

(1) Temperature and/or pressure ratings are determined by gasket or O-ring materials. Refer to Swagelok catalog MS-01-147 for ratings.

(2) Temperature and/or pressure ratings are determined by pipe thread sealant type. Refer to Swagelok catalog MS-01-91 for ratings.

Product Series and Size (in)	Pressure Retaining Material (Standard)	Port Connections	Port Connection Sizes	Maximum Working Pressure (psig)		Design Code of Construction
				At Min Temp (-325°F to 100°F)	At Max Temp (800°F)	
FJ Series Metal Hose- **3/4"**	Core 316/316L SS (ASTM A240) Braid 304 SS or 316L SS (ASTM A478) Weld Collar 304/304L SS (ASTM A269) or 316/316L SS (ASTM A269) End Connections 316/316L SS (ASTM A479)	Swagelok Tube Fitting **[TA TM SL SM]**	1/2" - 1 1/4" 12mm - 32mm	860	636	ASME B31.3 ISO 10380
		Female and Male VCR Metal Gasket Face seal Fitting **[RF RM]**	1/2" - 1"	860	636	
		Female and Male VCO O-ring Face seal Fitting **[VF VM]**	1/2" - 1"	860 (1)	718 @550°F (1)	
		Female 37° JIC and male 37° JIC with female swivel nut **[AN AS]**	1/2" - 1"	860	636	
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	1/2" - 1 1/4"	860 (2)	770 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	1/2" - 1 1/4"	860 (2)	770 @450°F (2)	
		Tube Butt Welds **[TB MTB]**	1/2" - 1" 12mm - 25mm	860	636	
		Female ISO/BSP Parallel Threads (ISO 228) **[FS]**	1/2"	860	800 @400°F (1)	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	1/2" - 1 1/4"	860 (1)	800 @400°F (1)	

(1) Temperature and/or pressure ratings are determined by gasket or O-ring materials. Refer to Swagelok catalog MS-01-147 for ratings.

(2) Temperature and/or pressure ratings are determined by pipe thread sealant type. Refer to Swagelok catalog MS-01-91 for ratings.

Product Series and Size (in)	Pressure Retaining Material (Standard)	Port Connections	Port Connection Sizes	Maximum Working Pressure (psig)		Design Code of Construction
				At Min Temp (-325°F to 100°F)	At Max Temp (800°F)	
FJ Series Metal Hose- **1"**	Core 316/316L SS (ASTM A240) Braid 304 SS or 316L SS (ASTM A478) Weld Collar 304/304L SS (ASTM A269) or 316/316L SS (ASTM A269) End Connections 316/316L SS (ASTM A479)	Swagelok Tube Fitting **[TA TM SL SM]**	3/4" - 1 1/2" 18mm - 38mm	680	503	ASME B31.3 ISO 10380
		Female and Male VCR Metal Gasket Face seal Fitting **[RF RM]**	3/4" - 1"	680	503	
		Female and Male VCO O-ring Face seal Fitting **[VF VM]**	3/4" - 1"	680 (1)	568 @550°F (1)	
		Female 37° JIC and male 37° JIC with female swivel nut **[AN AS]**	3/4" - 1"	680	503	
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	3/4" - 1 1/2"	680 (2)	608 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	3/4" - 1 1/2"	680 (2)	608 @450°F (2)	
		Tube Butt Welds **[TB MTB]**	3/4" - 1" 18mm - 25mm	680	503	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	3/4" - 1 1/2"	680 (1)	632 @400°F (1)	

(1) Temperature and/or pressure ratings are determined by gasket or O-ring materials. Refer to Swagelok catalog MS-01-147 for ratings.

(2) Temperature and/or pressure ratings are determined by pipe thread sealant type. Refer to Swagelok catalog MS-01-91 for ratings.

Product Series and Size (in)	Pressure Retaining Material (Standard)	Port Connections	Port Connection Sizes	Maximum Working Pressure (psig)		Design Code of Construction
				At Min Temp (-325°F to 100°F)	At Max Temp (800°F)	
FJ Series Metal Hose- **1 1/4"**	Core 316/316L SS (ASTM A240) Braid 304 SS or 316L SS (ASTM A478) Weld Collar 304/304L SS (ASTM A269) or 316/316L SS (ASTM A269) End Connections 316/316L SS (ASTM A479)	Swagelok Tube Fitting **[TA TM SL SM]**	1" - 2" 25mm - 50mm	680	503	ASME B31.3 ISO 10380
		Female and Male VCR Metal Gasket Face seal Fitting **[RF RM]**	1"	680	503	
		Female and Male VCO O-ring Face seal Fitting **[VF VM]**	1"	680 (1)	568 @550°F (1)	
		Female 37° JIC and male 37° JIC with female swivel nut **[AN AS]**	1"	680	503	
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	1" - 2"	680 (2)	608 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	1" - 2"	680 (2)	608 @450°F (2)	
		Tube Butt Welds **[TB MTB]**	1" 25mm	680	503	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	1" - 2"	680 (1)	632 @400°F (1)	

(1) Temperature and/or pressure ratings are determined by gasket or O-ring materials. Refer to Swagelok catalog MS-01-147 for ratings.

(2) Temperature and/or pressure ratings are determined by pipe thread sealant type. Refer to Swagelok catalog MS-01-91 for ratings.

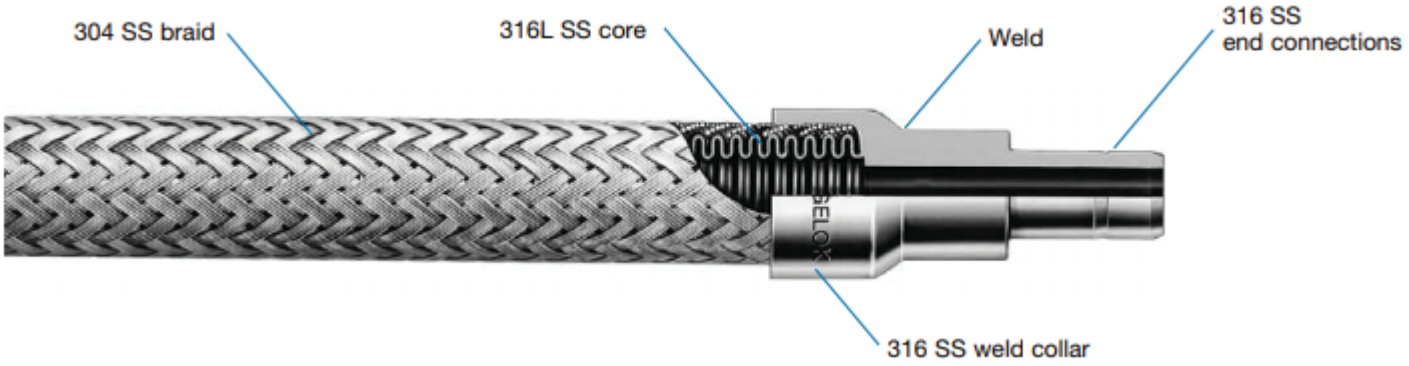
Product Series and Size (in)	Pressure Retaining Material (Standard)	Port Connections	Port Connection Sizes	Maximum Working Pressure (psig)		Design Code of Construction
				At Min Temp (-325°F to 100°F)	At Max Temp (800°F)	
FJ Series Metal Hose- **1 1/2"**	Core 316/316L SS (ASTM A240) Braid 304 SS or 316L SS (ASTM A478) Weld Collar 304/304L SS (ASTM A269) or 316/316L SS (ASTM A269) End Connections 316/316L SS (ASTM A479)	Swagelok Tube Fitting **[TA TM SL SM]**	1 1/4" - 2" 32mm - 50mm	520	385	ASME B31.3 ISO 10380
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	1 1/4" – 2"	520 (2)	465 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	1 1/4" – 2"	520 (2)	465 @450°F (2)	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	1 1/4" – 2"	520 (1)	484 @400°F (1)	
FJ Series Metal Hose- **2"**		Swagelok Tube Fitting **[TA TM SL SM]**	1 1/2" - 2" 38mm - 50mm	450	333	
		Female and male NPT Tapered Pipe Fitting **[PM PF]**	1 1/2" - 2"	450 (2)	403 @450°F (2)	
		Female and male ISO/BSP Tapered (ISO 7) Pipe Threads **[MT FT]**	1 1/2" - 2"	450 (2)	403 @450°F (2)	
		Male UN/UNF (SAE J1926) Stud End **[ST]**	1 1/2" - 2"	450 (1)	419 @400°F (1)	

(1) Temperature and/or pressure ratings are determined by gasket or O-ring materials. Refer to Swagelok catalog MS-01-147 for ratings.

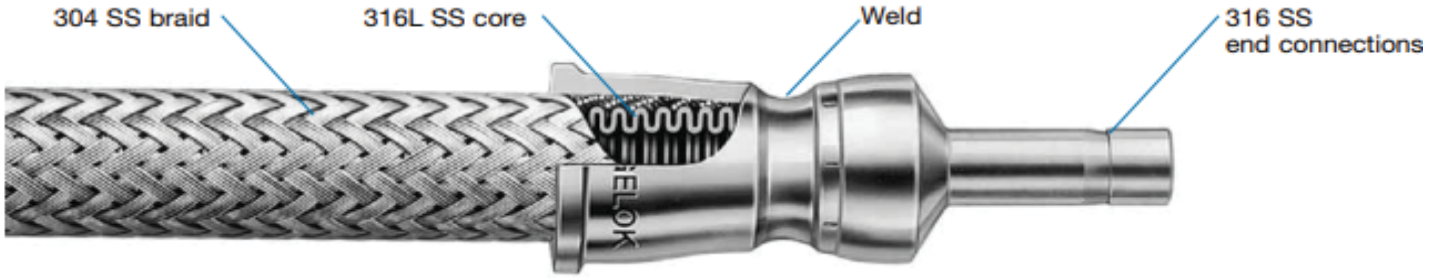
(2) Temperature and/or pressure ratings are determined by pipe thread sealant type. Refer to Swagelok catalog MS-01-91 for ratings.

Product Illustration

Swagelok FJ Series Manual Weld Assembly (1/4" and larger)



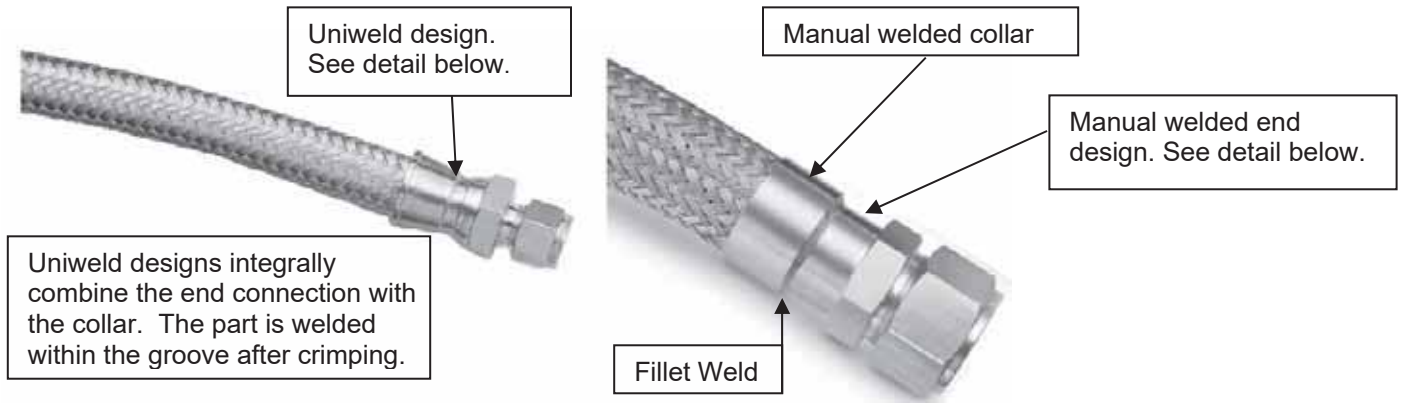
Swagelok FJ Series Automatic Weld Assembly (1/2" and under)



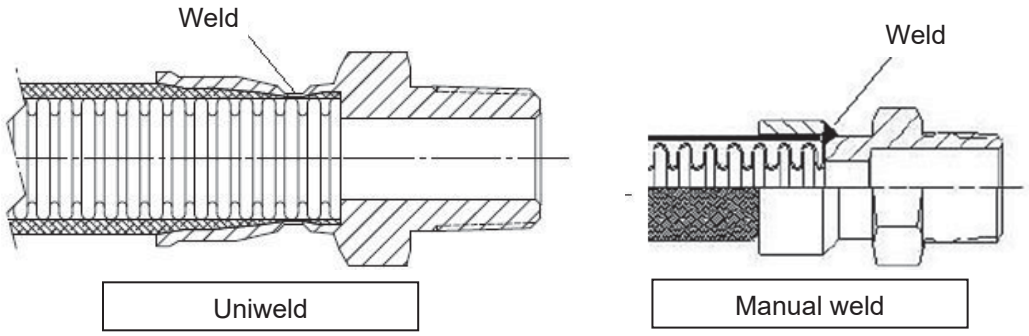
Configuration Example:

FJ hoses are available in two styles with many end types, end sizes, and possible overall lengths. There are two ways the hose end connections are attached to the tube and braid depending on the size of the hose:

- Gas Tungsten Arc Weld (GTAW) Uniweld with Integral Weld Collar (1/2” and under)
- Manual Weld with Manual Weld Collar (1/4” and larger)



Weld Detail:



Uniweld | Manual weld

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

Additional options that may affect pressure and/or temperature ratings may be made available within the scope of this approval. Examples of these would include the following:

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 FJ series hose assemblies are manufactured at Hose Master LLC and at the Swagelok Company locations in Solon, Ohio.

References

The below 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 Limited Ballafletcher Road Tromode IM4 4RA Isle of Man

2021-03182
ABSA
SAFETY CODES ACT - PROVINCE OF ALBERTA
ACCEPTED: 0D20616.52
See acceptance letter for conditions of registration.
Date: 2021-06-25 By:
ASHLING DICK, P. Eng.

This stamp and signature have been affixed electronically to this registered design as required by Section 20(1) of the Pressure Equipment Safety Regulation, in accordance with the Electronic Transactions Act.

the pressure equipment safety authority

9410 - 20 Ave N.W.
Edmonton, Alberta, Canada T6N 0A4
Tel: (780) 437-9100 / Fax: (780) 437-7787

June 25, 2021

Attention: Cecylia Garbacz
TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
TORONTO, ON M9W 6N9

The design submission, tracking number 2021-03182, originally received on June 11, 2021 was surveyed and accepted for registration as follows:

CRN : 0D20616.52 **Accepted on:** June 25, 2021

Reg Type: ADDITION TO ACC. FITTING **Expiry Date:** August 15, 2028

Drawing No. : ATTACHMENT A & B

Fitting type: FJ SERIES HOSE ASSEMBLIES

Design registered in the name of : SWAGELOK COMPANY

The registration is conditional on your compliance with the following notes:

*** See attachment A and B for manufacturing location, and scope of registration*

As indicated on AB-41 Statutory Declaration form and submitted documentation, the code of construction is ASME B31.3.

- It is our understanding that the fitting(s), included as the scope of this submission, that is(are) subject to the Safety Codes Act shall comply with the requirements of the indicated Standard or Code of Construction on the AB-41 Statutory Declaration as supported by the attached data which identifies the dimensions, materials of construction, press./temp. ratings and the basis for such ratings, and the identification marking of the fittings.
- This registration is valid only for fittings fabricated at the location(s) covered by the QC certificate attached to the accepted AB-41 Statutory Declaration form.
- This registration is valid only until the indicated expiry date and 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.

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

If you have any question don't hesitate to contact me by phone at (780) 433-0281 ext 3337 or fax (780) 437-7787 or e-mail Dick@absa.ca.

Sincerely,

DICK, ASHLING, P. Eng.
DOP Cert. No. D00007936