

TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
TORONTO ON M9W 6N9

Date: March 1, 2021
Account #: 35231
Journal #: 77463

Attn: TSSA

Re: Application for Design Registration

The design, as detailed in your, 0A22932.5, for a Fitting is accepted for registration as follows:

Registered To: SWAGELOK COMPANY **CRN:** 0A22932.51

Drawing #: Scope of Registration

Drawing Revision: NA

This design was registered based on a technical review performed by the province of initial registration in accordance with the Association of Chief Inspectors policy on reciprocal recognition of design review.

Reviewer's Notes:

Scope of Registration: SEE ATTACHMENT A AND B.SS PIPE FITTINGS

As required by CSA B51 4.2.1, this registration expires on 12-Jan-2031. This CRN is valid until the expiry date as long as the Manufacturer maintains a valid quality control program verified by an acceptable third-party agency until that date. Should the certification of the quality control program lapse before the expiry date, this registration shall become void. Any additional conditions of registration stated in TSSA CRN# 0A22932.5 registration shall apply to BC registration.

Contact me if you have any questions. The invoice for registration will be forwarded under separate cover.

Emilia Tam

emilia.tam@technicalsaftybc.ca
Design Administration

cc:



Technical Standards and Safety Authority
345 Carlingview Drive
Toronto, Ontario M9W 6N9
www.tssa.org

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, Joel Feldman, 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 USA (440) 248-4600 (440) 349-5970
(Plant Address) (Telephone No.) (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 ASME B31.1 for unlisted components, and ASME B31.3 for unlisted components
(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 9001:2015 which has been verified by the following authority, BSI

The items covered by this declaration, for which I seek registration, are category A. Fittings type fittings. In support of this application, the following information and/or test data are attached as follows:
ISO 9001:2015 Certificate, Attachment A, Attachment B, Catalog Information and other Support Documents
(drawings, calculations, test reports, etc.)

Declared before me at _____ in the _____ of _____
the _____ day of _____ AD 20_____.

Commissioner for Oaths:

Unable to get a notary signature or seal due to COVID-19 situation
(Printed name)

(Signature)

DocuSigned by:

11/2/2020 7:54 AM EST
C87GBBFFD3F14B7
(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 A

CRN: 0A22932.5
Registered by:
Dated: JANUARY 12, 2021



This Document has been digitally signed. The stamp size has been optimized for 11 x 17 documents

Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety Program

REGISTERED

C.R.N.: 0A22932.5

Signed:

Date: January 12, 2021.

NOTE: This registration expires on: **JANUARY 12, 2031**

FOR SCOPE OF REGISTRATION SEE THE ATTACHMENTS A AND B

*Information provided in this application is releasable under the Freedom of Information and Privacy Protection Act and may be disclosed upon request.



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 0A22932.5
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 Boilers and Pressure Vessels Safety Program

Canadian Registration Number Submittal
 Category A: Swagelok SS Pipe Fittings

Date: October 27, 2020
 Page 1 of 3

Attachment B. Scope of Registration for Swagelok Stainless Steel Pipe Fittings (Category A)

This document represents the scope of Swagelok 316 Stainless Steel Pipe Fittings covered by this submission for CRN approval. These Swagelok 316 Pipe Fittings have been evaluated in accordance with ASME B31.1-2018 for unlisted components and ASME B31.3-2018 for unlisted components.

Summary Table

| Product Description or Series | Material (Standard) | Port Connections and Sizes | Maximum Allowable Working Pressure | | | Design Code of Construction |
|--|--------------------------------------|--|-------------------------------------|--|---|--|
| | | | Up to 100°F (psig) | At maximum temperature per ASME B31.3 (psig) | At maximum temperature per ASME B31.1 (psig) | |
| Pipe Fittings (See the Configurations section for size limitations on elbows, tees, crosses, and plugs) | 316 SS (ASTM A479) straight fittings | NPT Male standard design 1/16 - 2 inch | 11 000 - 3900 | 8410 - 2980 @1000°F | 6210 - 2200 @1000°F | ASME B1.20.1 is listed in both ASME B31.1 and B31.3 |
| | | NPT Female, standard design 1/16 - 2 inch | 6700 - 3900 | 5120 - 2980 @1000°F | 3780 - 2200 @1000°F | |
| | | NPT Male and Female 10 ksi design 1/4 - 1/2 inch | 10 000 | 7650 @1000°F | 5650 @1000°F | |
| | | NPT Male Hollow Hex Plug Design 1/8 - 1/2 inch | 6600 - 4900 | 3720 - 2760 @1000°F | 5040 - 3740 @1000°F | |
| | | ISO-7 (tapered) (RT) Male 1/16 - 2 inch | 11 000 - 3900 | 8410 - 2980 @1000°F | 6210 - 2200 @1000°F | Unlisted Component in both ASME B31.1 and ASME B31.3 |
| | | ISO-7 (tapered) (RT) Female 1/16 - 2 inch | 6700 - 3900 | 5120 - 2980 @1000°F | 3780 - 2200 @1000°F | |
| | | ISO-7 tapered (RT) Male Hollow Hex Plug 1/8-1/2 inch | 6600 - 4900 | 3720 - 2760 @1000°F | 5040 - 3740 @1000°F | |
| | F316 SS (ASTM A182) shaped fittings | NPT Male and Female standard design 1/8 - 1 inch | 5000 - 4000 | 3820 - 3060 @1000°F | 2820 - 2260 @1000°F | ASME B1.20.1 is listed in both ASME B31.1 and B31.3 |
| | | ISO-7 (tapered) (RT) Male and Female 1/8 - 1 inch | 5000 - 4000 | 3820 - 3060 @1000°F | 2820 - 2260 @1000°F | Unlisted Component in both ASME B31.1 and ASME B31.3 |
| | 316 SS (ASTM A479) straight fittings | ISO/BSP (parallel) RS Male 1/8-1 inch | 5800 - 3620 with FKM bonded gasket* | 5800 - 3620 @400°F with FKM bonded gasket* | 5800 - 3620 @400°F with FKM bonded gasket* | Unlisted Component in both ASME B31.1 and ASME B31.3 |
| | | ISO/BSP (parallel) AG (RG) Female 1/4 - 1/2 inch | 4063 with copper gasket* | 4063 @400°F with copper gasket* | 4063 @400°F with copper gasket* | |
| | | UN/UNF(SAE) ST Male Stud & Female 1/8 - 1-1/2 inch | 5076 - 2538* | 5076 - 2538 @400°F* | 5076 - 2538 @400°F* | |
| | | Union Ball Joint (UBJ with Female NPT) 1/8 - 1 inch | 8400 - 4600 | 6426 - 3519 @1000°F | 4746 - 2599 @1000°F | |
| UNJ (JIC) AN Male & Female 1/4 - 1 inch | | 10 000 - 5000 | 7600 - 3800 @1000°F | 5600 - 2800 @1000°F | SAE J514 listed in ASME B31.3, unlisted in ASME B31.1 | |

*Pressure rating is gasket-dependent or O-Ring dependent

Product Description

Swagelok Pipe Fittings are furnished in a variety of configurations and shapes (straight, elbow, tee or cross). The table above, as well as the "Configurations" section, covers a variety of other end connections.



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Configurations

1. Nipples. (Close, Hex, Adapter, Reducing, Long)

Male NPT, adapting to RT (ISO Taper), RS (ISO/BSP Parallel), ST (SAE), and reducing to other sizes



2. Male and Female Adapters / Couplings / Reducers

Male and Female NPT, adapting to RT (ISO Taper), AG/RG (ISO/BSP Parallel), RS (ISO/BSP Parallel), ST (SAE), AN (JIC) and reducing to other sizes

Male and Female ST (SAE), adapting to AN (JIC) and reducing to other sizes



3. Elbows / Street Elbows / Tees / Street Tees / Crosses

Male and Female NPT, and reducing to other sizes

Elbows, Tees and Crosses are limited to a maximum size of one-inch in stainless steel.



4. Union Ball Joints

With Female NPT connections



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0A22932.5

Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety
Program

5. Caps and Plugs

Male NPT, RT (ISO Taper), ST (SAE)

Male NPT and RT Hollow Hex Plugs limited to a range of 1/8 inch to 1/2 inch.



(For dimensions see catalog.)

Product Options:

The product options listed below affect pressure and/or temperature ratings shown in the above Summary Table, but in all cases the ratings are less than, or equal to, those shown in the table.

1. RS gaskets:
 - a. Metal-and-elastomer bonded
 - b. Non-bonded stainless steel
 - c. Copper
2. RG gaskets:
 - a. Copper
 - b. Nickel
 - c. PTFE
3. Sealant for tapered pipe threads (NPT and ISO-7):
 - a. Curable resin with PTFE
 - b. PTFE tape

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:

1. Special marking
2. Special cleaning
3. Wire drills
4. Special long fitting lengths
5. Snubbers/frits and orifice plates
6. Equivalent metric or fractional hex sizes

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

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.

- Pipe Fittings MS-01-147, Rev Q

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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0A22932.5
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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 |