

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, Vice President, Engineering of Swagelok Company

located at 29500 Solon Road, Solon, Ohio 44139 USA

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (check one)

- comply with the requirements of ASME B31.1 and ASME B31.3 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...

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 A Type 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 Solon in the state of Ohio this 3rd day of October, 2019. Brenda Hammel (a Commissioner of Oaths or Notary Public) Joel C. Feldman (signature of applicant)

For ABSA Office Use Only:

NOTES: Swagelok Alloy 600 Tube Fittings

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:

Date Registered:

Expiry Date:

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulation AS 188/03, Pressure Equipment Discipline.

2020-02479 ABSA SAFETY CODES ACT - PROVINCE OF ALBERTA ACCEPTED: 0A22314.52 See acceptance letter for conditions of registration. Date: 2020-05-11 By: [Signature]

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.

May 11, 2020

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

The design submission, tracking number 2020-02479, originally received on May 07, 2020 was surveyed and accepted for registration as follows:

CRN : 0A22314.52 **Accepted on:** May 11, 2020
Reg Type: NEW DESIGN **Expiry Date:** April 03, 2030
Drawing No. : SEE ATTACHMENT B FOR SCOPE OF REGISTRATION
Fitting type: SWAGELOK ALLOY 600 TUBE FITTINGS
Design registered in the name of : SWAGELOK COMPANY

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

- ** See attachment A for a list of Swagelok manufacturing locations
- ** The annealed bar allowable stresses are used for the B166 N06600 material

As indicated on AB-41 Statutory Declaration form and submitted documentation, the code of construction are ASME B31.1 and 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, pressure/temperature 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

**Attachment B. Scope of Registration for Swagelok Alloy 600
 (ASTM B166, B564) Tube Fittings (Category A)**

This document represents the scope of Swagelok Inconel Alloy 600 Tube Fittings covered by this submission for CRN approval. These Swagelok Tube Fittings have been evaluated in accordance with ASME B31.3 for unlisted components and ASME B31.1 for unlisted components.

Summary Table

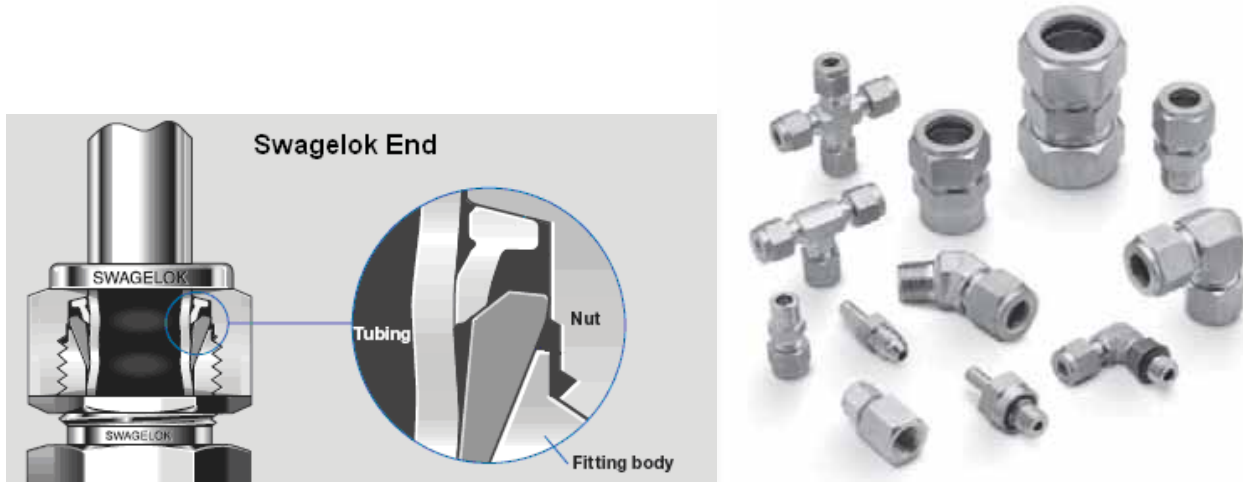
Product Description or Series	Material (Standard)	Port Connections and Sizes	Maximum Allowable Working Pressure		Design Code of Construction
			Up to 100°F	At maximum temperature	
Gaugeable Tube Fittings and Adapter Fittings	Alloy 600 (ASTM B166 / ASTM B564)	Swagelok End Connection 1/4, 3/8, 1/2 inch 6mm, 10mm, 12mm	See Table below	See Table below	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
			NPT Male 1/16 - 1 inch	11 000 – 5300 psig	8800 - 4240 psig @ 900°F (482°C)
		11 000 – 5300 psig		3300 - 1590 psig @ 1000°F (537°C)	ASME B31.3 (Unlisted Components)
		NPT Female 1/16 - 1 inch	6700 – 4400 psig	5360 - 3520 psig @ 900°F (482°C)	ASME B31.1 (Unlisted Components)
			6700 – 4400 psig	2010 - 1320 psig @ 1000°F (537°C)	ASME B31.3 (Unlisted Components)

Alloy 600 Swagelok Tube Fitting Pressure Rating Table

Swagelok End Connection Size	Maximum Allowable Working Pressure		
	Up to 100°F	At maximum temperature 900°F (482°C) ASME B31.1	At maximum temperature 1000°F (537°C) ASME B31.3
1/4	10 200 psig	5814 psig	3570 psig
3/8	6500 psig	3705 psig	2275 psig
1/2	5100 psig	2907 psig	1785 psig
6mm	670 bar	381 bar	234 bar
10mm	380 bar	216 bar	133 bar
12mm	310 bar	176 bar	108 bar

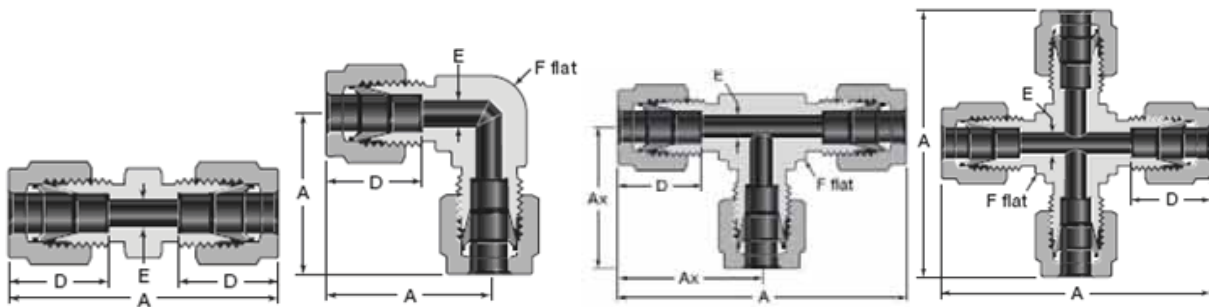
Product Description

Swagelok Fittings are furnished in a variety of configurations and shapes (straight, elbow, tee or cross). Swagelok Fittings consist of at least one Swagelok End – a proprietary two-ferrule mechanical-grip design. The table below, as well as the “Configurations” section, covers a variety of other end connections.

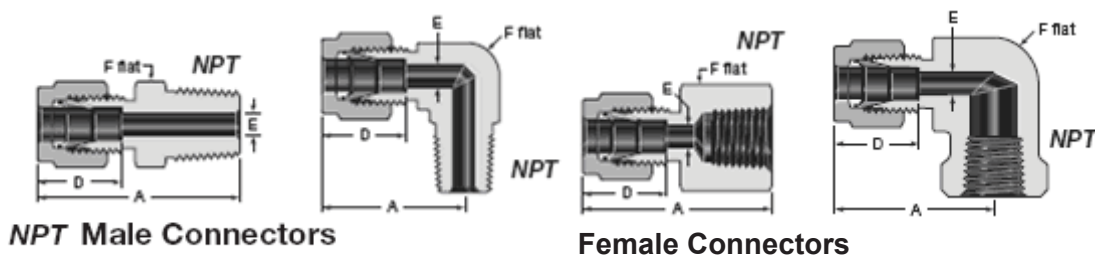


Configurations

1. Unions.



2. Male and Female connectors / adapters.



Product Options:

Some of the product options listed below affect the pressure-temperature ratings in the “Scope of Registration” section above, but in all cases the pressure ratings are the same or less than those shown in the Summary Table on page 1.

- Tapered pipe thread (NPT) sealant:
 - Curable resin with PTFE
 - PTFE tape
- Bored through fittings
- Plastic ferrules, (Nylon, Teflon, PEEK)

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:

- Special marking
- Special cleaning
- Wire drills
- bulkhead configurations
- Snubbers/frits and orifice plates

All of the above options, those that affect pressure and/or temperature ratings and those that do not, are within the scope of this approval.

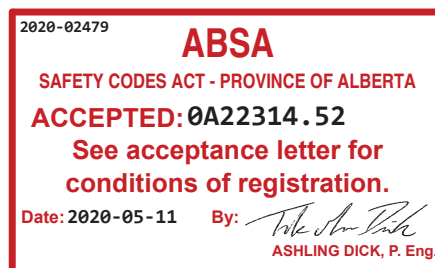
Quality System

The Swagelok Company quality system complies with the requirements of ISO 9001:2015. 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.

- Gaugeable Tube Fittings and Adapter Fittings MS-01-140, Rev Y
- Swagelok Tubing Data Sheet MS-01-107, Rev N



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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.

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