

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 of Engineering of Swagelok Company

located at 29500 Solon Road, Solon, Ohio 44139 USA (see Attachment A)

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 14th day of March, 2019

(print) Brenda Hammel (a Commissioner of Oaths or Notary Public) (sign) Brenda Hammel (a Commissioner of Oaths or Notary Public) Joel C. Feldt (signature of applicant)

For ABSA Office Use Only:

NOTES: 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 A Registration Number: OA 21395.52 Date Registered: 2019-08-01 Expiry Date: 2029-05-13

Attachment B. Scope of Registration for Swagelok Brass, (ASTM B16 / B283), Tube Fittings (Category A)

This document represents the scope of Swagelok Brass Tube Fittings covered by this submission for CRN approval. These Swagelok Tube Fittings have been evaluated in accordance with ASME B31.3-2016 for unlisted components and ASME B31.1 for unlisted components.

Summary Table

Product Description or Series	Material	Port Connections and Sizes	Maximum Allowable Working Pressure		Design Code of Construction
			Up to 100°F	At maximum temperature	
Swagelok Gaugeable Tube Fittings and Adapter Fittings	Brass C36000 (ASTM B16) for straight fittings, hardware	Tube fitting 1/8" to 1-1/8", 6mm – 28 mm	See below Table	See below Table	ASME B31.3 (Unlisted Components)
		NPT Male 1/16" – 2"	5500-1900 psig	1100-380 psig @ 400°F	
		ISO-7 (tapered)(RT) Male 1/16" – 2"			3300-1900 psig
		NPT Female 1/16" - 2"	2284 – 907 psig	297 - 118 psig @ 400°F	
	ISO-7 (tapered)(RT) Female 1/16" – 2"	2500–1500 psig			500 - 300 psig @ 400°F
	UN / UNF(SAE) Stud (ST) 1/8" – 2"				
	Unified (UNJ) (AN) Male 1/8" – 1"				
Unified (UNJ) (ANF) AN Female 1/8" – 1"					

ASSA

SAFETY CODES ACT - PROVINCE OF ALBERTA

REGISTRATION OF FITTINGS

REGISTRATION NO. 0A 21395.52

DWG. NO. or CAT. NO. Attachment B

TYPE OF FITTINGS Pipe Fitting

Date 2019-08-01 INITIALS dl

XING LIU, P.Eng.
DESIGN SURVEY ENGINEER



Brass Swagelok Tube Fitting Pressure Rating Table

Swagelok End Connection Size	Maximum Allowable Working Pressure (1)		
	Up to 100°F	B31.3 maximum temperature 350°F	B31.1 maximum temperature 200°F
1/8	3600 psig	1800 psig	2916 psig
3/16	3400 psig	1700 psig	2754 psig
1/4	3500 psig	1750 psig	2835 psig
5/16	2700 psig	1350 psig	2187 psig
3/8	2200 psig	1100 psig	1782 psig
1/2	2100 psig	1050 psig	1701 psig
5/8	1900 psig	950 psig	1539 psig
3/4	1800 psig	900 psig	1458 psig
7/8	1500 psig	750 psig	1215 psig
1	1500 psig	750 psig	1215 psig
1 1/8	1200 psig	600 psig	972 psig
6 mm	220 bar	110 bar	178 bar
8 mm	160 bar	80 bar	130 bar
10 mm	130 bar	65 bar	105 bar
12 mm	140 bar	70 bar	113 bar
14 mm	120 bar	60 bar	97 bar
15 mm	120 bar	60 bar	97 bar
16 mm	120 bar	60 bar	97 bar
18 mm	110 bar	55 bar	89 bar
20 mm	110 bar	55 bar	89 bar
22 mm	100 bar	50 bar	81 bar
25 mm	100 bar	50 bar	81 bar
28 mm	90 bar	45 bar	73 bar

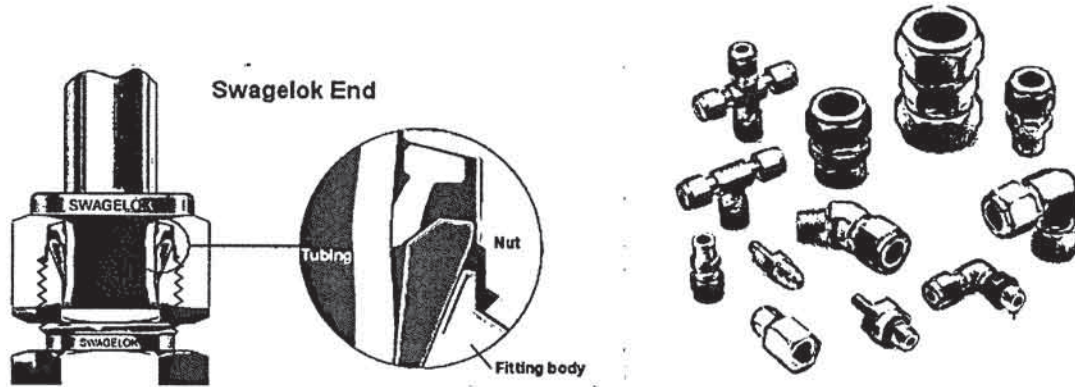
Note (1): Values based on C37700 / ASTM B283 forgings and thickest wall copper tubing per Swagelok Tubing Data Sheet MS-01-107. Thinner tubing may be used but in all cases the ratings are less than, or equal to, those shown in the table.

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 "Configurations" section covers a variety of other end connections.

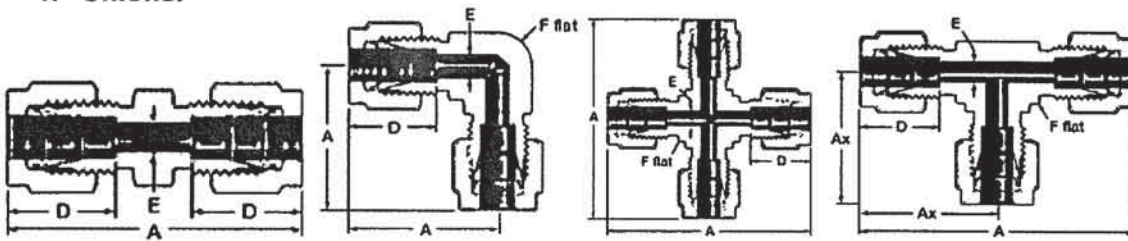
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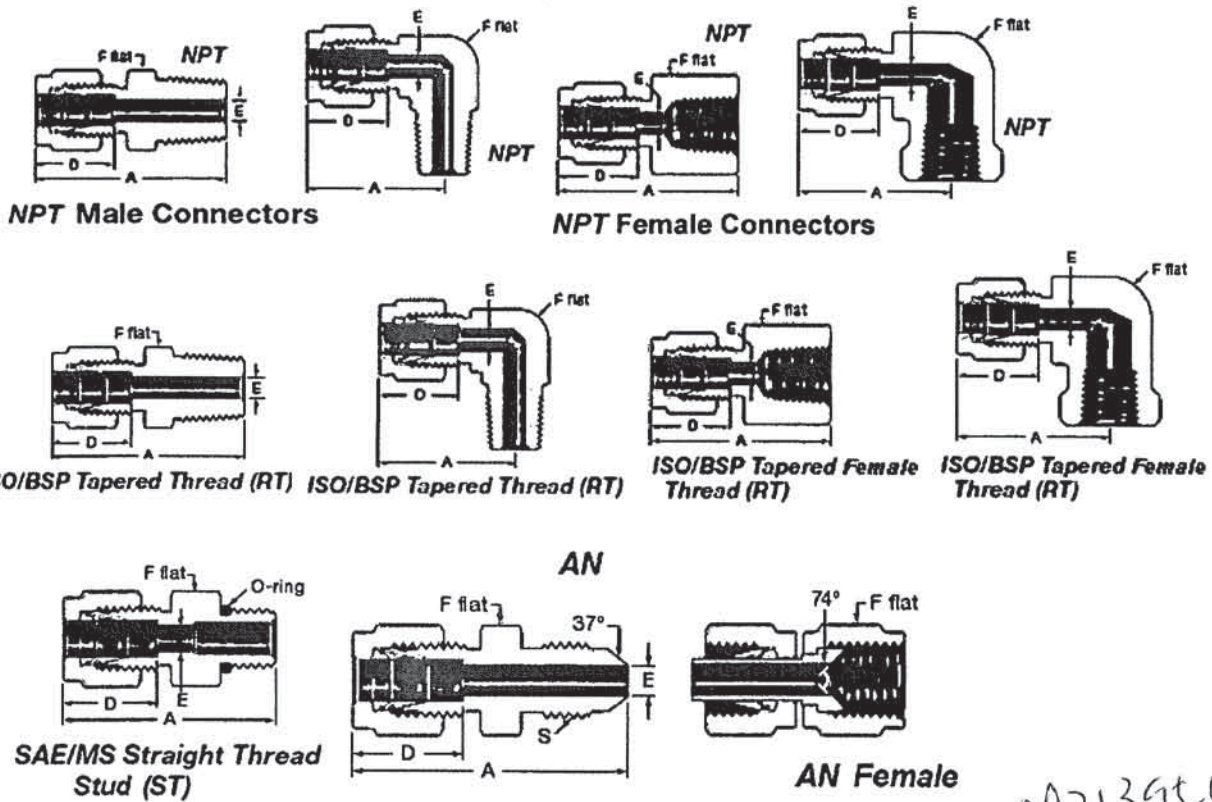


Configurations (For dimensions see catalog.)

1. Unions.



2. Male and Female connectors / adapters.



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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 table.

1. Tapered pipe threads (NPT and ISO-7) with sealant
 - a. Curable resin with PTFE
 - b. PTFE tape
2. Bored through fittings
3. 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:

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

Other options, not shown above, with pressure/temperature ratings equal to or less than shown in the Summary Table or do not affect pressure/temperature ratings may be made available under 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 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 Q

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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

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