

FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK
NUNAVUT

NOVA SCOTIA
YUKON

PRINCE EDWARD ISLAND
NORTHWEST TERRITORIES

NEWFOUNDLAND AND LABRADOR

MANUFACTURERS NAME: <u>Swagelok Company</u>	
MANUFACTURERS ADDRESS: <u>29500 Solon Road, Solon, Ohio 44139 USA</u>	
PLANT LOCATIONS: <u>Headquarters: 29500 Solon Road, Solon, Ohio 44139 USA (See Attachment A)</u>	
<p>CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY</p> <p><input checked="" type="radio"/> A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers <input type="radio"/> B Flanges: all flanges <input type="radio"/> C Valves: all line valves <input type="radio"/> D Expansion joints, flexible connections, and hose assemblies: all types <input type="radio"/> E Strainers, filters, separators, and steam traps <input type="radio"/> F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters <input type="radio"/> G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs <input type="radio"/> H Pressure retaining components that do not fall into one of the above categories <input type="radio"/> N Nuclear components: Class 1 <input type="checkbox"/> Class 2 <input type="checkbox"/> Class 3 <input type="checkbox"/> (Meeting AECB or ASME requirements)</p>	<p>TITLE OF THE STANDARD OF CONSTRUCTION</p> <p>ASME B31.3 for unlisted components</p>
<p>SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT</p> <p style="font-size: 2em; text-align: center;">Swagelok</p>	<p>TYPE OF CONSTRUCTION</p> <p>FORGED <input type="checkbox"/> WELDED <input type="checkbox"/> WROUGHT <input type="checkbox"/> CAST <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> DESCRIBE OTHER: Fittings are made from Bar</p>
<p>LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:</p> <p>ISO 9001:2015 Certificate, Attachment A, Attachment B, Catalog Information and other Support Documents</p>	

DECLARATION:

I Joel Feldman, Vice President, Engineering (see note 3) employed by Swagelok Company and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by BSI as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

Signature of Declarer: [Signature] 4/26/2021 | 7:44 AM EDT

Declared before me at Unable to get a notary
 This _____ day of _____ AD signature or seal due to
 Commissioner of Oaths or Notary Public: (sign) COVID-19 situation
 (Affix Official seal to the right)

USE THIS SPACE FOR THE
OFFICIAL SEAL

This space for Regulatory Authority use

This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: QA23299.5
 FID#: 1214

Notes:
 1. All fittings shall be registered in the name of the Manufacturer.
 2. Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
 3. The declaration shall be made by the person having full authority and responsibility for the quality of the end product.
 4. Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.

Newfoundland
 Labrador
 Service NL
 Registered QA23299.50
 Date 21/06/22
 Engineering and Inspection Services
 Registered by [Signature]
 UNDER THE AUTHORITY OF THE
 PUBLIC SAFETY ACT AND
 THE BOILER, PRESSURE VESSEL AND
 COMPRESSED GAS REGULATIONS



THIS IS PART OF CRN

0A23299.5

Technical Standards and Safety Authority

Attachment B. Scope of Registration for Swagelok Stainless Steel Medium Pressure Tube Fittings (Category A)

This document represents the scope of Swagelok 316 Stainless Steel Medium Pressure Tube Fittings covered by this submission for CRN approval. These Swagelok Medium Pressure Tube Fittings have been evaluated in accordance with ASME B31.3 for unlisted components.

Summary Table

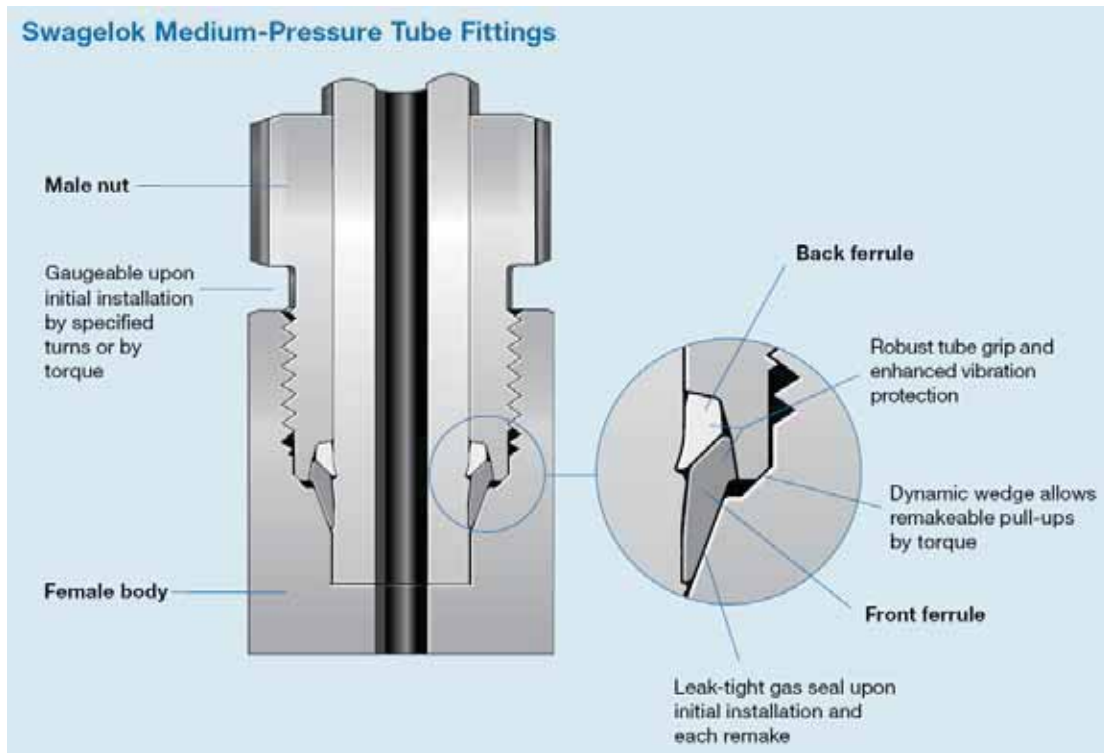
Product Description or Series	Material (Standard)	Port Connections and Sizes	Maximum Allowable Working Pressure		Design Code of Construction
			Up to 100°F (psig)	At maximum temperature per ASME B31.3 (psig)	
Medium Pressure Tube Fittings and Adapter Fittings	316 SS (ASTM A479) straight fittings, shaped fittings, hardware	Medium Pressure Tube Fitting FK 1/4 – 1 inch, 6mm, 10mm, 12mm	15 000 - 6250*	12 540 – 4781 @1000°F*	Unlisted Component in ASME B31.3
		Medium Pressure Tube Adapter FK-TA 1/4 – 1 inch 6mm, 10mm, 12mm	15 000 - 6250	12 540 - 5225 @1000°F	
		NPT Male and Female, Medium Pressure Design 1/16 - 1 inch	15 000 - 10 000	12 540 – 8360 @1000°F	
		UN/UNF(SAE) Heavy Duty STH Male Non-Positionable Stud 1/4 inch, 3/8 inch	9137**	9137 @400°F**	
		Cone & Thread MP, Male and Female 1/4 – 1 inch	15 000	12 540 @1000°F	
		Cone & Thread Tube Nipple CW 1/4 – 1 inch	15 000	12 540 @1000°F	

* Medium Pressure Tube Fitting (FK) pressure rating is tubing dependent

** SAE Heavy Duty (STH) pressure rating is O-Ring dependent

Product Description

Swagelok Medium Pressure Tube Fittings are furnished in a variety of configurations and shapes (straight, elbow, tee or cross). Swagelok Medium Pressure Tube Fittings consist of at least one Swagelok Medium Pressure Tube Fitting or Tube Adapter End, which have two-ferrule mechanical-grip design. The Swagelok medium pressure tube fitting end is a proprietary design, and the assembly consists of a body, nut, front and back ferrule (see detail). The table above, as well as the "Configurations" section, covers a variety of other end connections.



Configurations

1. Unions. (Straight, Elbow, Tee, Cross)

Swagelok Medium Pressure Tube Fitting (FK) End Connections



2. Tube Adapter

Swagelok Medium Pressure Tube Fitting (FK) with Medium Pressure Tube Adapter (FK-TA) End Connection

Swagelok Medium Pressure Tube Adapter (FK-TA) to an NPT (Male) End Connection



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Boilers and Pressure Vessels Safety
Program

3. Male and Female Connectors / Adapters

Swagelok Medium Pressure Tube Fitting (FK) End Connection, adapting to an:

- NPT (Male or Female) End Connection
- SAE Heavy Duty (Male), STH End Connection
- Cone & Thread (Male or Female), MP End Connection
- Cone and Thread Tube Nipple (Male), CW End Connection

Straight Fittings: 1/4" – 1", 6mm-12mm FK End Connections may adapt to any of the above listed end connections.

Shape Fittings: 1/4" – 3/4", 6mm-12mm FK End Connections may adapt to NPT, SAE, or Cone & Thread MP end connections.



4. Caps and Plugs

Swagelok Medium Pressure Tube Fitting



(For dimensions see catalog.)

Product Options:

The product option 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. Sealant for tapered pipe threads (NPT):
 - 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. Bulkhead Configurations ($\frac{1}{4}$ " – $\frac{3}{4}$ ", 6mm-12mm sizes only)
5. Equivalent metric or fractional hex sizes



All 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. 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.

- Medium- and High-Pressure Fittings, Tubing, Valves, and Accessories MS-02-472, Rev O

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