

UNIFORM STATUTORY DECLARATION FORM FOR THE REGISTRATION OF FITTING DESIGNS

NEW BRUNSWICK
NUNAVUT

NOVA SCOTIA
YUKON

PRINCE EDWARD ISLAND
NORTHWEST TERRITORIES

NEWFOUNDLAND AND LABRADOR

| | |
|--|--|
| MANUFACTURER'S NAME: <u>Swagelok Company</u> | |
| MANUFACTURER'S 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</p> <p><input type="radio"/> B Flanges: all flanges</p> <p><input type="radio"/> C Valves: all fire valves</p> <p><input type="radio"/> D Expansion joints, flexible connections, and hose assemblies: all types</p> <p><input type="radio"/> E Strainers, filters, separators, and steam traps</p> <p><input type="radio"/> F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters</p> <p><input type="radio"/> G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs</p> <p><input type="radio"/> H Pressure retaining components that do not fall into one of the above categories</p> <p><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 B31.1 for unlisted components, ASME B31.3 for unlisted components</p> |
| <p>SHOW MANUFACTURER'S NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT</p> <p align="center">Swagelok</p> | <p>TYPE OF CONSTRUCTION</p> <p>FORGED <input type="checkbox"/> WELDED <input type="checkbox"/> wrought <input checked="" type="checkbox"/> CAST <input type="checkbox"/> OTHER <input type="checkbox"/> RECORDS OTHER</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 (see note 2) 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]

Declared before me at Solon, Ohio

This 14th day of March AD 2019

Commissioner of Oaths
or Notary Public: (sign) [Signature]

(Affix Official seal to the right)

USE THIS SPACE FOR
OFFICIAL SEAL



This space for Regulatory Authority use

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

CRN: 0A21487.5

FID#: 1214

Notes: ALLOY 400 TUBE FITTINGS - D6

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

CRN EXPIRES JUNE 10, 2029 - D.6.

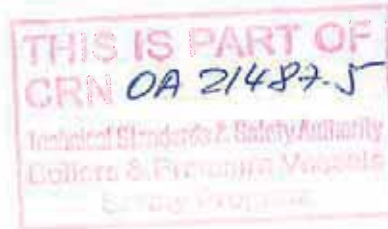
ACCEPTED
PROVINCE OF PRINCE EDWARD ISLAND
COMMUNITIES, LAND & ENVIRONMENT
 C.R.N. 0A21487.59
 DATE: July 26 2019
[Signature]
INSPECTION SERVICES SECTION
BOILER/PRESSURE VESSEL BRANCH

**Attachment B. Scope of Registration for Swagelok Alloy 400,
 (ASTM B164 / B564), Tube Fittings (Category A)**

This document represents the scope of Swagelok Alloy 400 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 | 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 400 (ASTM B164 / B564) | Swagelok tube fitting 1/8 – 1 inch 6mm - 25mm | See Table on Page 2 | See Table on Page 2 | ASME B31.3 (Unlisted Components) |
| | | NPT Male 1/16 - 1 inch | 9200-4400 psig | 6900 – 3300 psig @ 800°F (426°C) | |
| | | NPT Female 1/16 - 1 inch | 5600-3700 psig | 4200 – 2775 psig @ 800°F (426°C) | |



Alloy 400 Swagelok Tube Fitting Pressure Rating Table

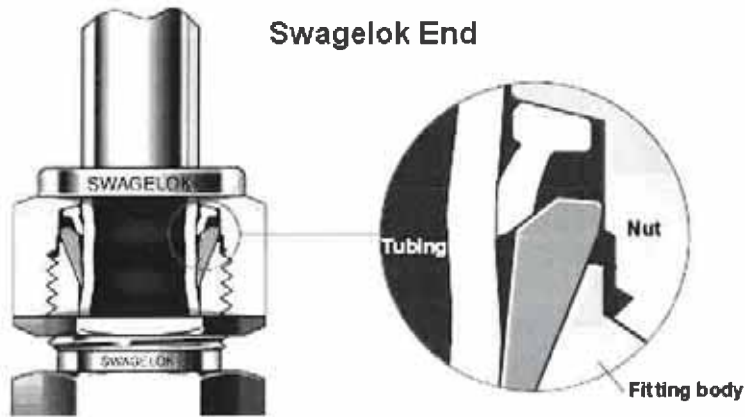
| Swagelok End Connection Size | Maximum Allowable Working Pressure (1) | |
|------------------------------|--|--------------------------------------|
| | Up to 100°F | At maximum temperature 800°F (426°C) |
| 1/8 | 10,100 psig | 7575 psig |
| 3/16 | 9500 psig | 7125 psig |
| 1/4 | 9500 psig | 7125 psig |
| 5/16 | 7300 psig | 5475 psig |
| 3/8 | 6100 psig | 4575 psig |
| 1/2 | 4400 psig | 3300 psig |
| 5/8 | 5600 psig | 4200 psig |
| 3/4 | 4600 psig | 3450 psig |
| 7/8 | 4500 psig | 3375 psig |
| 1" | 4300 psig | 3225 psig |
| 6 mm | 620 bar | 465 bar |
| 8 mm | 450 bar | 337.5 bar |
| 10 mm | 350 bar | 262.5 bar |
| 12 mm | 290 bar | 217.5 bar |
| 14 mm | 270 bar | 202.5 bar |
| 15 mm | 330 bar | 247.5 bar |
| 16 mm | 320 bar | 240 bar |
| 18 mm | 300 bar | 225 bar |
| 20 mm | 290 bar | 217.5 bar |
| 22 mm | 310 bar | 232.5 bar |
| 25 mm | 290 bar | 217.5 bar |

Note (1): Values based on thickest wall alloy 400 tubing per Swagelok Tubing Data Sheet MS-01-107.



Product Description

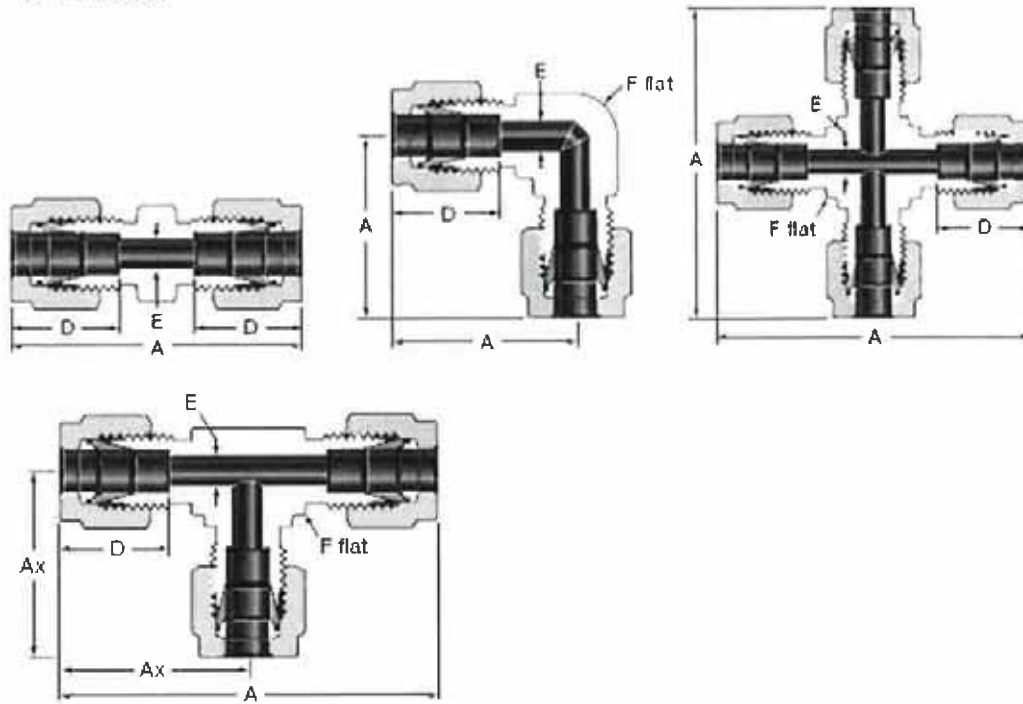
Swagelok Fittings are furnished in a variety of configurations and shapes (straight, elbow, tee or cross). Swagelok Fittings consist of at least one Swagelok End – a proprietary two-ferrule mechanical-grip design. The “Configurations” section covers other available end connections.



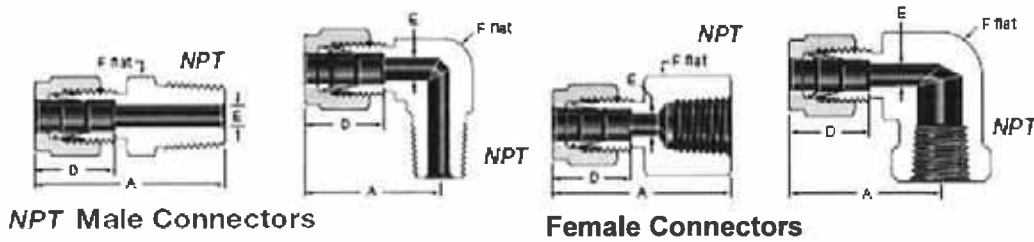
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Technical Standards & Safety Agency
Collars & Pressure Vessels
Safety Program

Configurations

1. Unions.



2. Male and Female connectors / adapters.



THIS IS PART OF
CRN 0A 21487.5
Technical Standards & Safety Authority
Boilers & Pressure Vessels
- Safety Program

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) 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



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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|---|--|
| 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 |

