

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</p> <p><input type="radio"/> B Flanges: all flanges</p> <p><input type="radio"/> C Valves: all line 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 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"/></p> <p>DESCRIBE OTHER: Fittings made of bar stock or forgings</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] 11/12/2020 | 7:54 AM EST

Declared before me at Unable to get a notary signature THIS SPACE FOR THE

This _____ day of _____ AD _____ OFFICIAL SEAL

Commissioner of Oaths
or Notary Public: (sign) _____

(Affix Official seal to the right)

<p>This space for Regulatory Authority use</p> <p>This registration must be revalidated after ten (10) years from the date of acceptance.</p>	
<p>CRN: <u>0A22932.5</u></p> <p>FID#: <u>1214</u></p> <p>316 Stainless steel pipe fittings. NPT, ISO-7, UBJ, ISO/BSP, SAE, JIC connections. Up to 11000psi.</p> <p>Notes:</p> <ol style="list-style-type: none"> 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. <p>CRN expires Jan.12th, 2031 - DG</p>	<p style="text-align: center;">ACCEPTED</p> <p style="text-align: center;">PROVINCE OF PRINCE EDWARD ISLAND COMMUNITIES, LAND & ENVIRONMENT</p> <p>C.R.N. <u>0A22932.59</u></p> <p>DATE: <u>Feb 12 2021</u></p> <p style="text-align: center;"><u>[Signature]</u> INSPECTION SERVICES SECTION BOILER/PRESSURE VESSEL BRANCH</p>



THIS IS PART OF CRN
0A22932.5
Technical Standards and Safety Authority
Boilers and Pressure Vessels Safety
Program

Canadian Registration Number Submittal
Category A: Swagelok SS Pipe Fittings

Date: October 27, 2020
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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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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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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