

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...

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.

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 10th day of June, 2019

(print) Brenda Nammel (a Commissioner of Oaths or Notary Public)

(sign) Brenda Nammel (a Commissioner of Oaths or Notary Public)

(signature of applicant)

For ABSA Office Use Only:

NOTES: 1 Code editions are 2016. 2 Attachment B Pages 1 thru 5 dated December 11

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: 0A21840.52

(Signature of the Administrator/SCO)

Date Registered: DEC 20 2019

Expiry Date: Oct 4 2029

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Pressure Equipment Discipline.

"See Acceptance Letter for the comments and/or conditions of registration"

Attachment B: Scope of CRN Registration for Swagelok ATW, MW, and TB Series Weld Fittings (Category A)

This document represents the scope of Swagelok® Automatic Tube Weld (ATW), Micro-Fit Weld (MW), and Tube Butt Weld (TB) Fittings covered by this submission for CRN registration. These weld fittings were designed and evaluated in accordance with ASME B31.1-2016 for unlisted components and ASME B31.3-2016 for unlisted components.

Table 1 – Summary Table – ATW FITTINGS

Product Series* (Size)	Material (Standard)	End Connections and Sizes	Maximum Allowable Working Pressure (psig)		Design Code of Construction
			Up to 100°F	At Maximum Temperature (850°F)	
-4 ATW (1/4")	316L SS (ASTM A276, ASTM A479) for straight fittings, hardware	Tube Fitting 1/4", 3/8", 1/2" Tube Butt Weld 1/4"	5100	2390	ASME B31.1 (Unlisted Components)
-6 ATW (3/8")		Tube Fitting 3/8" Tube Butt Weld 1/4" 3/8"	3300	1550	
-8 ATW (1/2")		Tube Fitting 1/4" 1/2" Tube Butt Weld 1/4", 3/8", 1/2"	3700	1730	
-12 ATW (3/4")		Tube Fitting 3/4"	2400	1120	
-16 ATW (1")		Tube Fitting 1"	2400	1120	
-6 MATW (6mm)	F316L SS (ASTM A182) for shaped fittings	N/A	6095	2860	ASME B31.3 (Unlisted Components)
-8 MATW (8mm)			4499	2110	
-10 MATW (10mm)			3483	1630	
-12 MATW (12mm)			2902	1360	
-18 MATW (18mm)			2902	1360	

* "MATW" denotes metric sized Automatic Tube Welds

ABSA	
SAFETY CODES ACT - PROVINCE OF ALBERTA	
REGISTRATION OF FITTINGS	
REGISTRATION NO.	0A21840.52
DWG. NO. or CAT. NO.	<i>Attachment B dated December 11, 2019</i>
TYPE OF FITTINGS	<i>Weld Fittings</i>
DEC 20 2019	INITIALS <i>Keith Rudolf</i>
Date	KEITH RUDOLF, P.Eng. DESIGN SURVEY ENGINEER

"See Acceptance Letter for the comments and/or conditions of registration"

Table 2 – Summary Table – MW FITTINGS

Product Series* (Size)	Material (Standard)	Maximum Allowable Working Pressure (psig)		Design Code of Construction
		Up to 100°F	At Maximum Temperature (850°F)	
-2MW (1/8")	316L SS (ASTM A276**, SEMI F20)	8500	3990	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
-4MW (1/4")		5100	2390	
-6MW (3/8")		3300	1550	
-8MW (1/2")		3700	1730	
-12MW (3/4")		2400	1120	
-16MW (1")		2400	1120	
-6MMW (6mm)		6095	2860	
-8MMW (8mm)		4499	2110	
-10MMW (10mm)		3483	1630	
-12MMW (12mm)		2902	1360	

* End connections are all micro-fit weld end connections. "MMW" denotes metric sizes.

** 20% minimum elongation allowed, also noted in product catalog

Table 3 – Summary Table – TB FITTINGS

Product Series* (Size)	Material (Standard)	Maximum Allowable Working Pressure (psig)		Design Code of Construction
		Up to 100°F	At Maximum Temperature (850°F)	
-2TB (1/8")	316L SS (ASTM A276, ASTM A479) for straight fittings	8500	3990	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
-4TB (1/4")		5100	2390	
-6TB (3/8")		3300	1550	
-8TB (1/2")		3700	1730	
-12TB (3/4")		2400	1120	
-16TB (1")		2400	1120	
-6MTB (6mm)	F316L SS (ASTM A182) for shaped fittings	6095	2860	ASME B31.3 (Unlisted Components)
-8MTB (8mm)		4499	2110	
-10MTB (10mm)		3483	1630	
-12MTB (12mm)		2902	1360	
-18MTB (18mm)		2902	1360	

* End connections are all tube butt weld end connections. "MTB" denotes metric sizes.

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Figure 1 – ATW Product Illustration

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Precisely finished diameter matches tube diameter.

Integral filler ring aids in alignment.



ATW Fitting Configurations

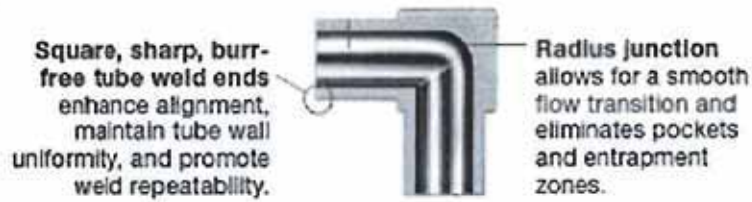
ATW Straights	
ATW Crosses	
ATW Tees	
ATW Elbows	

ATW Body End Connections

Swagelok Tube Fittings	
Tube Butt Weld	

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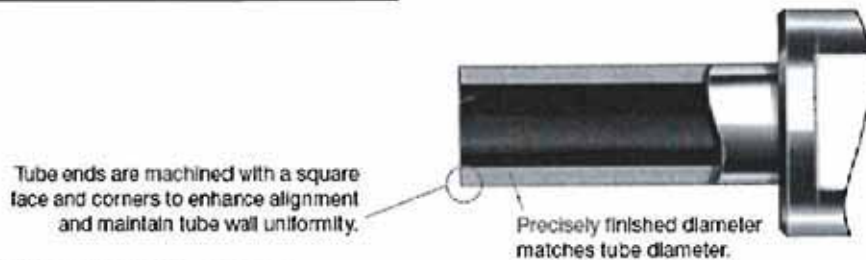
Figure 2 – MW Product Illustration



MW Fitting Configurations

MW Straights	
MW Tees	
MW Elbows	
MW Tribows and Quadbows	
MW Crosses	

Figure 3 – TB Product Illustration



TB Fitting Configurations

TB Straights	
TB Tees	
TB Crosses	
TB Elbows	

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.

- Weld Fittings Product Catalog MS-01-149 Rev. M

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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 Company A.G. (European Technology Center) St. GallerstraBe 84 Lachen, Switzerland 8853 Switzerland
Swagelok Limited Ballafletcher Road Tromode IM4 4RA Isle of Man	