

(a) Design Qualification

### REGISTERED



CRN: CSA-OC20864.56

CSA Group per CSA B51

Statutory Declaration Registration of Fittings Registration Process administered by

| $t^1$ | Joel Feldman   |
|-------|--|
|       | Vice President, Engineering  |
|       | (Position eg, president, plant manager, chief ang.)  |
| Of    | Swagelok Company   |
|       | (name of company)  |
| Loca  | ated at Headquarters: 29500 Solon Road, Solon, Ohio 44139 USA (See Attachment A) (plant address)   |
| do s  | olemnly declare that the fittings listed hereunder, which are subject to the Boilers & Pressure Vessels Act:   |
|       | comply with all the requirements of the ANSI/ASME codes as to their dimensions, material, identification & service for which are required: 754531, 2331  |
| Or    |  |
|       | are not covered by the provisions of the ANSI/ASME codes, and are therefore constructed to comply with code and standard, and are designed to the best current engineering practice, as shown by the supporting test data.   |
| (b)   | Quality control of Manufacture   |
|       | ther declare the manufacture of these fittings is controlled by a quality control program which complies with the requirements of<br>0 9001:2015 and has been verified by the following authority or authorized agency BSI   |
| The   | fittings <sup>2</sup> covered by this declaration, for which I seek registration, are Category C. Valves   |
| Dec   | papert of the application, the following information, calculations and/or test data are attached.  SO 9001:2015 Certificate. Attachment A. Attachment B. Catalog Information and other Support Documents  Signal L. Resident Portage County  Resident Portage County  Notary Public, State of Ohio  My Commission Expires: 02/08/2019  AD 18 2018  Signature of Declarer |
|       |  |
|       | For Official Use Only  |
|       | ne application is accepted for registration in Category in accordance with the Boilers and Pressure Vessels Act and SA Standard B51.   |
| TI    | nis registration must be revalidated after ten (10) years from the date of acceptance. Nov.18-202B   |
| R     | egistered Number CRN CSA-OC20864.56 For the Chief Tappector R.W. Barnes Date CSA Feb. 26. 2019   |
| -     |  |

All fittings are required to be registered in the name of the Manufacturer.

Three completed copied of Statutory Declaration form together with three copies of Catalogs, drawings of Bulletins illustrating above fittings shall be submitted.

<sup>2</sup> This form shall be completed and signed by the president of highest official in the manufacturing plan where the fitting is produced.

Swagelok

Canadian Registration Number Submittal # V-MANIFOLD-2018

Category C: Swagelok V Series Manifolds

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# Attachment B. Scope for Swagelok V Series Manifold Valves (Category C)

#### **Product Scope**

This document represents the scope of Swagelok® V Series Manifold Valves covered by this submission for CRN approval. These products were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

#### Summary Table

| Product | Main<br>Pressure     | ring Bearing         | Port Connections and Sizes   | Maximum Rated<br>Pictostra (psig)               |                   | Design Corp        |                                 |
|---------|----------------------|----------------------|--|---|-------------------|--------------------|---------------------------------|
| Series  | Bearing<br>Component |                      |  | @ 100° F  | @ Max<br>Temp     | of<br>Construction |                                 |
| V2      | Standard 316SS       | 316SS                | Swagelok Tube Fitting 1/2", 12MM Female NPT 1/4", 1/2"                 | 6000  | 1715 @<br>1200ºF  |                    |                                 |
| V2      | Body                 | (ASTM A479)          | Flange (MSS)   | 6000  | 3030 @<br>1000°F  |                    |                                 |
| V2      | Compact<br>Body      | 316SS<br>(ASTM A479) | Male NPT 1/2", 3/4"<br>Female NPT 1/2", 3/4"<br>Female NPT 1/4" (vent) | 6000  | 1715 @<br>1200 ºF | ASME B31.1         |                                 |
| V3      | Standard<br>Body     |                      | 316SS  | Swagelok Tube Fitting 1/2", 12MM Female NPT 1/2 | 6000              | 1715 @<br>1200 °F  | (Unlisted<br>Components)<br>and |
| VS      |                      |                      | (ASTM A479)  | Flange (MSS)                                    | 6000              | 3030 @<br>1000°F   | ASME B31.3<br>(Unlisted         |
| V3      | Compact<br>Body      | 316SS<br>(ASTM A479) | Male NPT 1/2", 3/4"<br>Female NPT 1/2", 3/4"<br>Female NPT 1/4" (vent) | 6000  | 1715 @<br>1200 °F | Components)        |                                 |
| V5      | Standard             | 316SS                | Swagelok Tube Fitting 1/2", 12MM Female NPT 1/8", 1/4", 1/2"           | 6000  | 1715 @<br>1200 °F |                    |                                 |
| VS      | Body                 | (ASTM A479)          | Flange (MSS)   | 6000  | 3030 @<br>1000°F  |                    |                                 |



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Swagelok

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#### **Product Illustration**

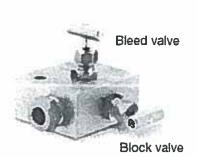
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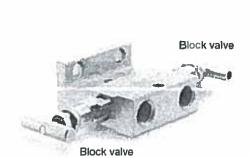
#### V2 Series Manifold Valves

#### **Standard Body**

#### Flange Body

#### **Compact Body**







#### **V3 Series Manifold Valves**

#### **Standard Body**

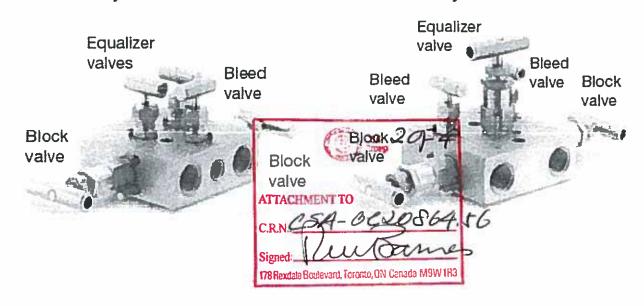
#### **Compact Body**



#### **V5 Series Manifold Valves**

#### Standard Body - One Bleed Valve

#### Standard Body – Two Bleed Valves



Swagelok

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#### **Product Options:**

Some of the product options listed below affect the pressure-temperature ratings shown in the Summary Table, but in all cases the ratings are less than those shown in the Summary Table. All of the following options are within the scope of this registration:

#### Valve Design

Small Bonnet Valve – actuator threads are wetted Large Bonnet Valve – actuator threads are non-wetted

#### Valve Packing Material

Virgin Polytetrafluoroethene (PTFE) – standard Grafoil – high temperature option

#### Flange Seal Materials

Fluorocarbon FKM
Virgin Polytetrafluoroethene (PTFE)
Reinforced Polytetrafluoroethene (PTFE)
Grafoil

#### **MSS Flange Fasteners**

Standard Hex Head Bolt Long Stud with Hex Nut Short Hex head Bolt

#### **Eccentric Flanges**

Swagelok Tube Fitting Female NPT Pipe Butt Weld

#### **Concentric and Eccentric Pipe Nipples**

Stainless Steel Carbon Steel

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#### **Quality System**

Swagelok Company's quality system complies with the requirements of BS EN ISO 9001:2015. Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The V Series Manifold Valves are manufactured at a Swagelok Company location in Solon, Ohio.

References

The product catalog does not represent the full scope of registration, but rather details some of the most common options. See Swagelok's Instrument Manifold Systems Catalog MS-02-445, R2

Signed VIII

178 Rexdale Boulevard, Toronto, GN Canada M9W IR3

## Attachment A. Swagelok Manufacturing Locations

This document lists the Swagelok locations where end item or component level manufacturing activities take place.

|   | ter the second s |
|---|--|
| Swagelok Company  | Swagelok Company (Falon 1)   |
| 29500 Solon Road  | 348 Bishop Road  |
| Solon, Ohio 44139   | Highland Heights, Ohio 44143   |
| USA   | USA  |
| Swagelok Company (Highland)   | Swagelok Company (Falon 2)   |
| 318 Bishop Road   | 358 Bishop Road  |
| Highland Heights, Ohio 44143  | Highland Heights, Ohio 44143   |
| USA   | USA  |
| Swagelok Company (OFC)  | Swagelok Company (HPF)   |
| 29495 F.A. Lennon Drive   | 6050 Cochran Road  |
| Solon, Ohio 44139   | Solon, Ohio 44139  |
| USA   | USA  |
| Swagelok Company (Atlantic)   | Swagelok Company (Snow Metal)  |
| 26651 Curtiss Wright Parkway  | 6060 Cochran Road  |
| Willoughby Hills, Ohio 44092  | Solon, Ohio 44139  |
| USA   | USA  |
| Swagelok Company (Micro)<br>26653 Curtiss Wright Parkway<br>Willoughby Hills, Ohio 44092<br>USA | Swagelok Company (Alfred)<br>29500 Ambina Drive<br>Solon, Ohio 44139   |
| Swagelok Hose Services Company (SHSC)   | Swagelok Company (Strongsville)  |
| 29900 Solon Industrial Parkway  | 15400 Foltz Road   |
| Solon, Ohio 44139   | Strongsville, Ohio 44119   |
| Swagelok (China) Fluid System Technologies Ltd.   | Swagelok Company A.G. (European Technology   |
| Changshu Export Process Zone  | Center)  |
| Changshu Economic Development Zone  | St. GallerstraBe 84  |
| Changshu, Jiangshu  | Lachen, Switzerland 8853   |
| 215513 China  | Switzerland  |
| Swagelok Limited Ballafletcher Road Tromode IM4 4RA Isle of Man                                 | · IOICIDARTOF  |

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