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**Date:** 31-Jul-2024  
**TSBC Account #:** 061644  
**TSBC Admin Number:** 108644  
**Canadian Registration Number:** 0C23957.21

### Re: Application for Design Registration

The design, as detailed in your Design Portal application Swagelok Company-2024-01596 for a Pressure Fitting is registered with the following notes and considerations:

<b>Registered To:</b>	Swagelok Company
<b>Project Name:</b>	Swagelok Company-2024-01596
<b>Drawing #:</b>	Catalog MS-02-340
<b>Drawing Revision:</b>	R

### Conditions of Registration:

(1) Fitting Registration Expiry Date: 08-May-2034 (2) The registration is valid until the indicated expiry date only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date. Should the approval of quality management system lapse before the expiry date indicated above, this registration shall become void.

### Reviewer's Notes:

Any additional conditions and considerations from the initial province of registration shall apply to this BC registration.

Full details of this submission including the scope of registration, design conditions, fabrication details, and calculations pertaining to this design are located in the above Admin Number on the Design Portal. For all other enquiries, please contact [eim@technicalsaftybc.ca](mailto:eim@technicalsaftybc.ca).

The Engineering Information Management Team



**Attachment B: Scope for Swagelok VS03 and VS04 Series Process Interface Valves and MS02 and MS03 Series Process Monoflanges (Category C)**

This document represents the scope of the Swagelok VS03 and VS04 Series Process Interface Valves and MS02 and MS03 Series Process Monoflanges covered by this submission for CRN approval. These products were designed and evaluated in accordance with ASME B16.34, ASME B16.5, ASME VIII Division 1, API 6A, and API 6D.

**Summary Tables**

Table 1: VS03 Scope							
Body Material/ Specification	Configuration	ASME Flange Class	Flange Size	Bore Size	Minimum Temperature	Maximum Allowable Working Pressure (psig)	
						At 100°F	At 356°F
S31600/S31603 ASTM A479 and F316/F316L ASTM A182	Ball/Needle/Ball (Block/Bleed/Block)  Full Bore  Reduced Bore	150 300 600 900 900/1500 2500	1 in. (DN 25)  1-1/2 in. (DN 40)  2 in. (DN 50)  3 in. (DN 80)	1 in. (DN 25)  1-1/2 in. (DN 40)  2 in. (DN 50)	-50°F	6000	4280
Carbon Steel ASTM A350 LF2						6170	5280
S31803 ASTM A479 and F51 ASTM A182						6250	5120
S32760 ASTM A479 and F55 ASTM A182						5000	3940
N04400 ASTM B164 and ASTM B564						6250	5820
N06625 ASTM B446 and ASTM B564							
N08825 ASTM B425 and ASTM B564							

- 1) All seat and seal combinations
- 2) All flange types: RF smooth, RF serrated, RTJ, FF serrated, and FF smooth
- 3) Outlet connection = same as process



4) Bleed connection: 1/2 in. female NPT

Table 2: VS04 Flange by Flange and Flange by Thread Scope							
Body Material/ Specification	Configuration	ASME Flange Class	Process Connection Size	Outlet Connection	Minimum Temperature	Maximum Allowable Working Pressure (psig)	
						At 100°F	At 500°F
S31600/S31603 ASTM A479 and F316/F316L ASTM A182	Ball/Needle/Ball (Block/Bleed/Block)  Ball/Needle (Block/Bleed)  Ball/Ball (Block/Block)  3/8 in. (9.5 mm) bore	150  300/600  900/1500  2500	1/2 (DN 15)  3/4 (DN20)  1 in. (DN 25)  1-1/2 in. (DN 40)  2 in. (DN 50)  3 in. (DN 80)	Flange  1/4, 3/8, 1/2, 3/4 in. female NPT  1/4, 1/2, 3/4 in. male NPT  1/4, 3/8, 1/2, 3/4, 6mm, 10mm, 12mm, 20mm Swagelok	-50°F	6000	4280
Carbon Steel ASTM A350 LF2						6170	5280
S31803 ASTM A479 and F51 ASTM A182						6250	5120
S32760 ASTM A479 and F55 ASTM A182						6250	5120
N04400 ASTM B164 and ASTM B564						5000	3940
N06625 ASTM B446 and ASTM B564						6250	5820
N08825 ASTM B425 and ASTM B564						6250	5820

- 1) All seat and seal combinations
- 2) All flange types: RF smooth, RF serrated, RTJ, FF serrated, and FF smooth
- 3) Bleed connection: 1/2 in. female NPT



Table 3: VS04 Thread by Thread Scope						
Body Material/ Specification	Configuration	Inlet Connection	Outlet Connection	Minimum Temperature	Maximum Allowable Working Pressure (psig)	
					At 100°F	At 500°F
S31600/S31603 ASTM A479 and F316/F316L ASTM A182	Ball/Needle/Ball (Block/Bleed/Block)  Ball/Needle (Block/Bleed)  Ball/Ball (Block/Block)  3/8 in. (9.5 mm) bore	1/4, 3/8, 1/2, 3/4 in. female NPT  1/4, 1/2, 3/4 in. male NPT  1/4, 3/8, 1/2, 3/4, 6mm, 10mm, 12mm, 20mm Swagelok		-50°F	6000	4280
Carbon Steel ASTM A350 LF2					6170	5280
S31803 ASTM A479 and F51 ASTM A182					6250	5120
S32760 ASTM A479 and F55 ASTM A182					6250	5120
N04400 ASTM B164 and ASTM B564					5000	3940
N06625 ASTM B446 and ASTM B564					6250	5820
N08825 ASTM B425 and ASTM B564					6250	5820

- 1) All seat and seal combinations
- 2) All flange types: RF smooth, RF serrated, RTJ, FF serrated, and FF smooth
- 3) Bleed connection: 1/2 in. female NPT

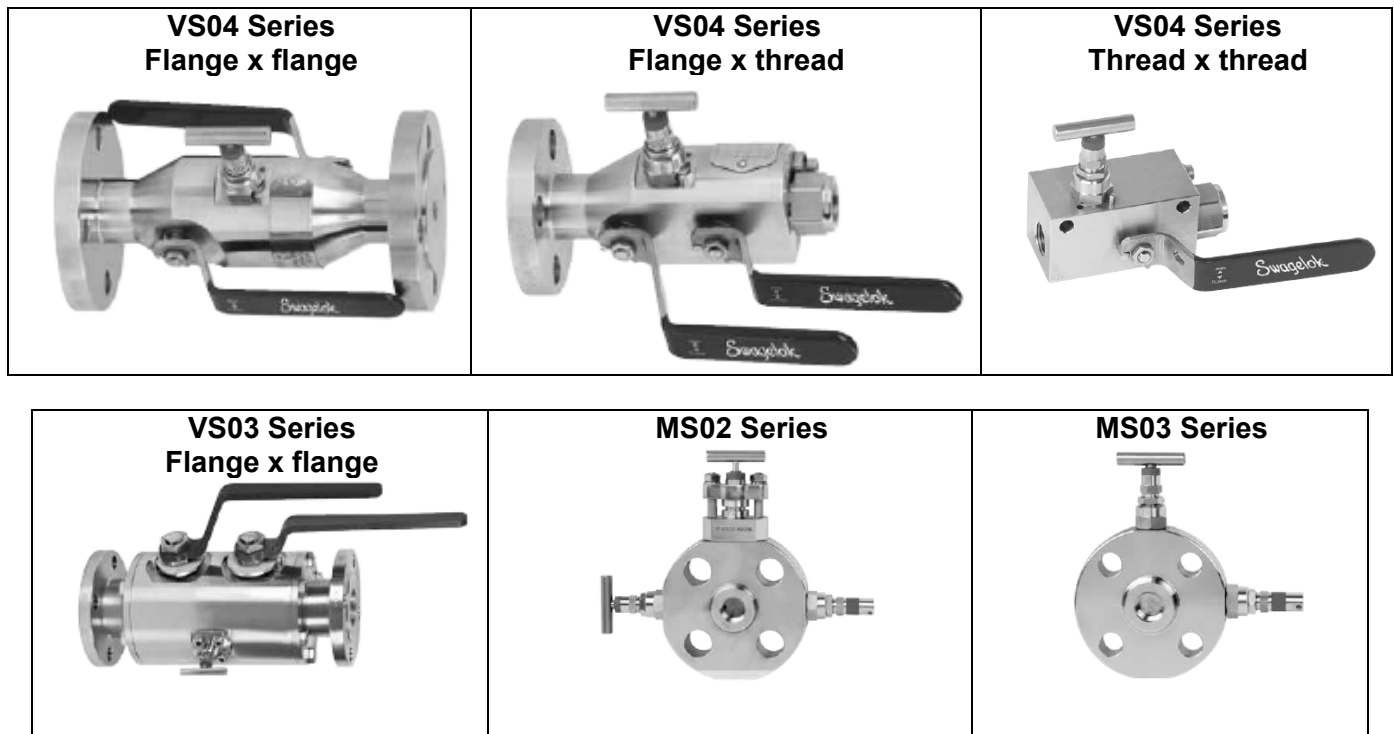


**Table 4: MS02 and MS03 Scope**

Body Material/ Specification	Configuration	ASME Flange Class	Process Connection Size	Outlet Connection	Minimum Temperature	Maximum Allowable Working Pressure (psig)	
						At 100°F	At 1000°F
S31600/S31603 ASTM A479	OS&Y Bolted Bonnet  Integral Screwed Bonnet  Block, Block and Bleed, Double Block and Bleed, Block and Bleed, dual outlet	150  300/600  900/1500  2500	1/2 in. (DN 15)  3/4 in. (DN 20)  1 in. (DN 25)  1-1/2 in. (DN 40)  2 in. (DN 50)	Monoflange wafer (thru holes)  1/4 in. female NPT  1/2 in. female NPT	-65°F	6000	4280
Carbon Steel ASTM A350 LF2						6170	5280
S31803 ASTM A479						6250	5120
S32760 ASTM A479						6250	5120
N04400 ASTM B164						5000	3940
N06625 ASTM B446						6250	5820
N08825 ASTM B425						6250	5820

- 1) All seal combinations
- 2) All flange types: RF smooth, RF serrated, RTJ, FF serrated, and FF smooth
- 3) Bleed connection: 1/4 in. female NPT, 1/2 in. female NPT, none

## Product Illustrations



## Typical Product Characteristics:

The list below are examples of product options which do not affect the pressure-temperature ratings shown in the Summary Table. All of the following options are within the scope of this registration:

- Lockable lever handles (for block valves)
- Non-lockable lever handles (for block valves)
- Antitamper bleed valve
- Bar handle (for bleed valve)
- Injection and sampling probes
- Silconert coating

## 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 registration, but rather details some of the most common options.

- Swagelok Process Interface Valves Catalog MS-02-340 Rev Q