

ATTN: TSSA BPV NATIONAL REGISTRATION -
TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DR
TORONTO ON M9W 6N9

Date: 24-Dec-2024
TSBC Account #: 061440
TSBC Admin Number: 111263
Canadian Registration Number: 0C25329.51

Re: Application for Design Registration

The design, as detailed in your Design Portal application 0C25329.5 - Swagelok Company for a Pressure Fitting is registered with the following notes and considerations:

Registered To:	Swagelok Company
Project Name:	0C25329.5 - Swagelok Company
Drawing #:	Attachment B-Scope of CRN Registration for Swagelok Processes Pressure Regulators-
	July 2, 2024
Drawing Revision:	N/A

Conditions of Registration:

(1) Fitting Registration Expiry Date: 04-Jul-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.

The Engineering Information Management Team



Attachment B. Scope of CRN Registration for Swagelok Processes **Pressure Regulators sizes 08 (1/2") to 24 (1.5") (Category C)**

This document represents the scope of the Swagelok Process Pressure Regulators (SGRS, SGRD, SHRS, SHRD, SGBS, SGBD, SHBS, SGRA, and SGBA Series) covered by this submission for CRN approval. These products comply with the requirements of ASME B31.1-2020 "Power Piping" as an unlisted component per Section 104.7.2 and ASME B31.3-2022 "Process Piping" as an unlisted component per Section 304.7.2.

Note:

The temperature ratings in the table below in most cases exceed those shown in the product catalog. The pressure retaining components are designed to be safe at the temperature rating as demonstrated in the Code Compliance Summary, but the Swagelok factory must be consulted to determine which seat and seal materials listed in the Typical Product Characteristics section below are suitable for use at this temperature.

Summary Table

Product Series & Size	Main Pressure Bearing Component	Main Pressure Bearing Material	Port Connections and Sizes	Maximum Rated Pressure						Design Code of Construction
				At -49°F to 100°F			At maximum temperature			
				Inlet	Outlet	Dome	Inlet	Outlet	Dome	
SGRS08	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1/2"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRS12	Body	Stainless Steel (UNS S31603 / ASTM A479)	ASME B16.5 Flange 1/2" Female NPT 3/4"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
			ASME B16.5 Flange 3/4" Female NPT 1"							
			ASME B16.5 Flange 1"							
SGRS16	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1" ASME B16.5 Flange 1"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRS24	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1.5" ASME B16.5 Flange 1.5"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGBS08	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1/2"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)



Product Series & Size	Main Pressure Bearing Component	Main Pressure Bearing Material	Port Connections and Sizes	Maximum Rated Pressure						Design Code of Construction
				At ambient temperature			At maximum temperature			
				Inlet	Outlet	Dome	Inlet	Outlet	Dome	
SGBS12	Body	Stainless Steel (UNS S31603 / ASTM A479)	ASME B16.5 Flange 1/2" Female NPT 3/4" ASME B16.5 Flange 3/4" Female NPT 1" ASME B16.5 Flange 1"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGBS16	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1" ASME B16.5 Flange 1"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGBS24	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1.5" ASME B16.5 Flange 1.5"	6000psi @100°F	6000psi @100°F	N/A	1450psi @356°F	1450psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRD08	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1/2"	6000psi @100°F	6000psi @100°F	413bar @38°C	1450psi @356°F	1450psi @356°F	1450psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRD12	Body	Stainless Steel (UNS S31603 / ASTM A479)	ASME B16.5 Flange 1/2" Female NPT 3/4" ASME B16.5 Flange 3/4" Female NPT 1" ASME B16.5 Flange 1"	6000psi @100°F	6000psi @100°F	413bar @38°C	1450psi @356°F	1450psi @356°F	1450psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRD16	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1" ASME B16.5 Flange 1"	6000psi @100°F	6000psi @100°F	413bar @38°C	1450psi @356°F	1450psi @356°F	1450psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRD24	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1.5" ASME B16.5 Flange 1.5"	6000psi @100°F	6000psi @100°F	413bar @38°C	1450psi @356°F	1450psi @356°F	1450psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRA08	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1/2"	6000psi @100°F	6000psi @100°F	250psi @100°F	1450psi @356°F	1450psi @356°F	188psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SGRA12	Body	Stainless Steel (UNS S31603 / ASTM A479)	ASME B16.5 Flange 1/2" Female NPT 3/4" ASME B16.5 Flange 3/4" Female NPT 1" ASME B16.5 Flange 1"	6000psi @100°F	6000psi @100°F	250psi @100°F	1450psi @356°F	1450psi @356°F	188psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)



Canadian Registration Number
Category C: Swagelok Process Pressure Regulators

Date: July 2, 2024
Page 3 of 5

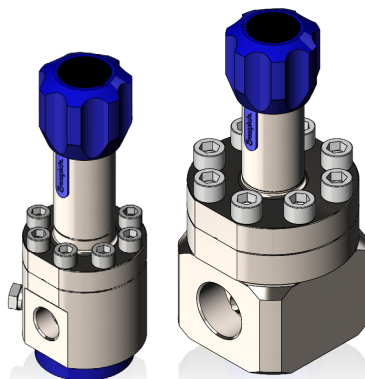
Product Series & Size	Main Pressure Bearing Component	Main Pressure Bearing Material	Port Connections and Sizes	Maximum Rated Pressure						Design Code of Construction
				At ambient temperature			At maximum temperature			
				Inlet	Outlet	Dome	Inlet	Outlet	Dome	
SHRS08	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1/2" "	250psi @100°F	250psi @100°F	N/A	188psi @356°F	188psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SHRS12	Body	Stainless Steel (UNS S31603 / ASTM A479)	ASME B16.5 Flange 1/2" Female NPT 3/4" ASME B16.5 Flange 3/4" Female NPT 1" ASME B16.5 Flange 1"	250psi @100°F	250psi @100°F	N/A	188psi @356°F	188psi@3 56°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SHRS16	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1" ASME B16.5 Flange 1"	250psi @100°F	250psi @100°F	N/A	188psi @356°F	188psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SHRS24	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1.5" ASME B16.5 Flange 1.5"	250psi @100°F	250psi @100°F	N/A	188psi @356°F	188psi @356°F	N/A	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SHRD08	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1/2"	250psi @100°F	250psi @100°F	250psi @100°F	188psi @356°F	188psi @356°F	188psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SHRD12	Body	Stainless Steel (UNS S31603 / ASTM A479)	ASME B16.5 Flange 1/2" Female NPT 3/4" ASME B16.5 Flange 3/4" Female NPT 1" ASME B16.5 Flange 1"	250psi @100°F	250psi @100°F	250psi @100°F	188psi @356°F	188psi @356°F	188psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SHRD16	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1" ASME B16.5 Flange 1"	250psi @100°F	250psi @100°F	250psi @100°F	188psi @356°F	188psi @356°F	188psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
SHRD24	Body	Stainless Steel (UNS S31603 / ASTM A479)	Female NPT 1.5" ASME B16.5 Flange 1.5"	250psi @100°F	250psi @100°F	250psi @100°F	188psi @356°F	188psi @356°F	188psi @356°F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)



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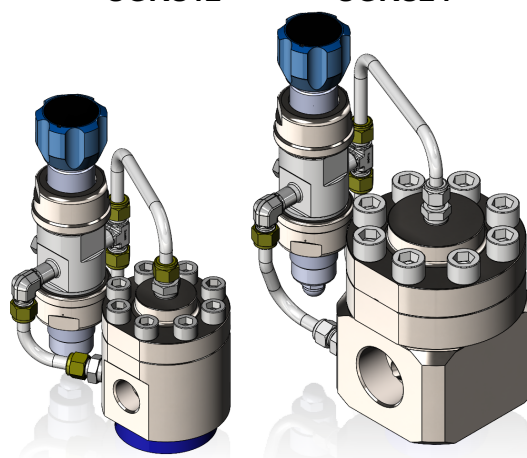
Date: July 2, 2024
Page 4 of 5

Product Illustration



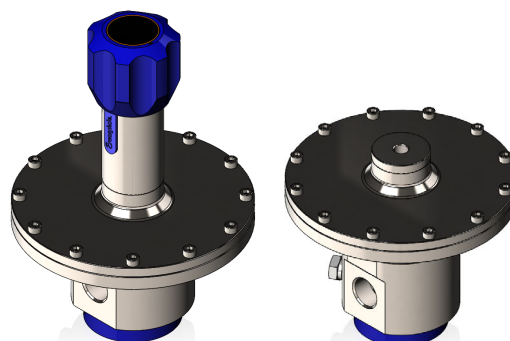
SGRS12

SGRS24



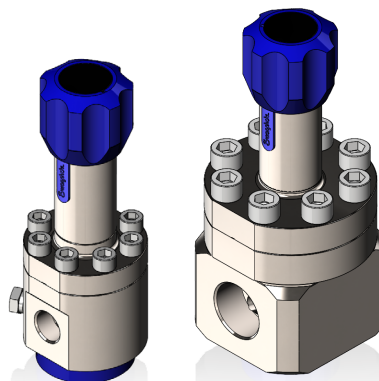
SGRD12

SGRD24



SHRS12

SGRA12



SGBS12

SGBS24



Typical Product Characteristics:

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:

- Body Seal Materials: FKM, Nitrile, EPDM, HNBR
- Diaphragm Materials: FKM, Nitrile, EPDM, HNBR
- Piston Seal Materials: FKM, Nitrile, EPDM, HNBR
- Seat Materials: FKM, Nitrile, EPDM, HNBR, PCTFE, PEEK

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

Handle Type
Cleaning options
Panel Mounting
Feedback Loops
Handle color
Anti-tamper
Laser Etching
ASTM G93 cleaning
NACE Components
External Feedback
External Feedback to the Pilot

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 below does not represent the full scope of the registration but rather details some of the most common options.

- MS-02-492 Process Pressure Regulators Rev. -