

Direction des équipements sous pression

Montréal, 20 septembre 2023.

CECYLIA GARBACZ
TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
TORONTO ON
CANADA M9W 6N9

Fabricant: SWAGELOK COMPANY

29500 SOLON ROAD SOLON OHIO U.S.A. 44139

Numéro de dossier : 945388

Numéro(s) de dessin(s): Scope of registration 5-14-13

#### Objet: Enregistrement des plans et devis - Confirmation de l'enregistrement

Bonjour,

Nous vous informons que votre demande d'enregistrement de plans et devis a été traitée et que cette conception a été enregistrée sous le numéro d'enregistrement canadien (NEC\CRN) suivant : 0C16304.56.

Nous portons votre attention sur certaines exigences réglementaires concernant les installations sous pression, ainsi que des codes et normes qui y sont associés :

- Le fabricant doit maintenir un programme de contrôle de la qualité valide pour fabriquer un équipement selon ce NEC;
- Ce numéro d'enregistrement demeure valide tant et aussi longtemps que les paramètres de conception demeurent inchangés. Dans le cas d'accessoires, l'enregistrement est valide pour une durée de 10 ans à partir de la date d'enregistrement. Les documents de conception doivent alors être resoumis pour validation;
- Le fabricant doit nous transmettre une copie de la Déclaration de conformité du constructeur (Manufacturer's Data Report) pour chaque appareil ou chaudière fabriqué selon ce NEC dans les 30 jours suivant la signature de cette déclaration;
- Le numéro de dessin enregistré et le numéro de révision doivent être indiqués sur la déclaration de conformité pour les équipements fabriqués selon ce NEC.

Le présent avis d'approbation ne dégage pas le fabricant de ses responsabilités quant à la conception ou à la construction des équipements ou d'accessoires fabriqués selon un NEC.

Salutations distinguées,

Bureau d'expertise et d'homologation en équipements sous pression

#### Montréal

255, boul. Crémazie Est, 2ième étage Montréal (Québec) H2M 1L5 Téléphone : 514 873-2546 Sans frais : 1 866 262-2084

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Montréal, le 20 septembre 2023.

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TECHNICAL STANDARDS & SAFETY AUTHORITY
345 CARLINGVIEW DRIVE
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Manufacturer: SWAGELOK COMPANY

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**OUR REFERENCE: 945388** 

Design number: Scope of registration 5-14-13

#### **Subject: Design registration confirmation**

Hi.

We wish to inform you that your design registration application has been evaluated and that it was registered under the following Canadian Registration Number (CRN): **0C16304.56.** 

The following is a reminder of your obligations regarding certain requirements of the regulation respecting pressure vessels, and the referenced codes and standards:

- The manufacturer must maintain a valid quality control program to manufacture equipment according to the CRN.
- The CRN remains valid as long as there are no changes to the design calculations that might affect the pressure boundary. The design registration of fittings expires 10 years after acceptance. It must, therefore, be resubmitted for validation.
- The manufacturer shall submit a copy of the *Manufacturer's Data Report* to us for each boiler or pressure vessel manufactured according to this CRN within 30 days following the signing of this report.
- The drawing number and the revision number registered under this CRN must be indicated on the *Manufacturer's Data Report* for equipment manufactured according to the CRN.

This notice of approval does not relieve the manufacturer of their responsibilities with respect to the design or fabrication of equipment manufactured according to this CRN.

Yours sincerely,

Bureau d'expertise et d'homologation en équipements sous pression

#### Montréal

# **Attachment A. Swagelok Manufacturing Locations**

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

	<del>,</del>				
Swagelok Company 29500 Solon Road Solon, Ohio 44139 USA	Swagelok Company (HPF) 6050 Cochran Road Solon, Ohio 44139 USA				
Swagelok Company (OFC) 29495 F.A. Lennon Drive Solon, Ohio 44139 USA	Swagelok Company (Snow Metal) 6060 Cochran Road Solon, Ohio 44139 USA				
Swagelok Precision Machining Services 1924 East 337th Street Eastlake, OH 44095 USA	Swagelok (China) Fluid System Technologies Ltd. Changshu Export Process Zone Changshu Economic Development Zone Changshu, Jiangshu 215513 China				
Swagelok Company (Highland) 318 Bishop Road Highland Heights, Ohio 44143 USA	Swagelok Company (Strongsville) 15400 Foltz Road Strongsville, Ohio 44119				
Swagelok Company (Atlantic) 26651 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Alfred) 29500 Ambina Drive Solon, Ohio 44139				
Swagelok Company (Micro) 26653 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Hose Services Company (SHSC) 29900 Solon Industrial Parkway Solon, Ohio 44139				
Swagelok Company (Falon 1) 348 Bishop Road Highland Heights, Ohio 44143 USA	Swagelok Limited Ballafletcher Road Tromode IM4 4RA Isle of Man				
Swagelok Company (Falon 2) 358 Bishop Road Highland Heights, Ohio 44143 USA					



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# Attachment B. Scope for Swagelok K Series Pressure Regulators (Category C) Régie du bătiment

# **Product Scope**

This document represents the scope of the K Series Pressure Regulators covered by this submission for CRN approval. The Swagelok K Series Pressure Regulators were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

# **Summary Table**

	Aain Pressure Bearing Component	Main Pressure Bearing Material		ı					
Product Series Main Pressure			Port Connections and Sizes	At ambient temperature		At maximum temperature		Design Code of Construction	
	Maii F			Inlet	Outlet	Inlet	Outlet		
	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	6000 psi @ 100 °F	500 psi @ 100 ºF	3600 psi @ 392 °F	500 psi @ 392 ºF	ASME B31.1 (Unlisted	
KPR			Tube Stub 1/4" x .035 VCR Gland no nuts 1/4" VCR rotatable female 1/4" VCR rotatable male 1/4"	3600 psi @ 100 ºF	500 psi @ 100 ºF	3600 psi @ 392 ºF	500 psi @ 392 ºF		
		Brass (UNS C67500 / ASTM A479)						Components) and ASME B31.3	
		Alloy 400 (UNS N04400 / ASTM B164)	Female NPT 1/4"	3600 psi @ 100 ⁰F	500 psi @ 100 ºF	3600 psi @ 392 ºF	500 psi @ 392 ºF	(Unlisted Components)	
		Alloy C-276 (UNS N10276 / ASTM B574)							
	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	6000 psi @ 100 °F	500 psi @ 100 °F	3600 psi @ 392 °F	500 psi @ 392 °F		
		Body / ASTM B138 Alloy 400 (UNS N04400 / ASTM B164 Alloy C-276 (UNS N10276	Brass (UNS C67500 / ASTM B138)	Female NPT 1/4"	3600 psi @ 100 ⁰F		3600 psi @ 392 ⁰F	500 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KCY			Alloy 400 (UNS N04400 / ASTM B164)						
			Alloy C-276 (UNS N10276 / ASTM B574)						
KCM	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	3600 psi @ 100 °F	500 psi @ 100 <sup>0</sup> F	3600 psi @ 392 <sup>0</sup> F	500 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)	
KLF	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	3600 psi @ 100 <sup>0</sup> F	250 psi @ 100 ºF	3600 psi @ 392 <sup>o</sup> F	250 psi @ 392 ºF	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)	

	Main Pressure Bearing Component	Main Pressure Bearing Material	Port Connections and Sizes	Maximum Rated Pressure				
Product Series				At ambient temperature		At maximum temperature		Design Code of Construction
	Mair Co			Inlet	Outlet	Inlet	Outlet	
KHF	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/2"	3600 psi @ 100 °F	250 psi @ 100 ºF	3600 psi @ 392 ºF	250 psi @ 392 ºF	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
КСР	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/8"	3600 psi @ 100 °F	1500 psi @ 100 <sup>0</sup> F	3600 psi @ 392 <sup>0</sup> F	1500 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KPP	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	6000 psi @ 100 °F	3000 psi @ 100 ºF	6000 psi @ 392 ºF	2975 psi @ 392 ºF	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KPF	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/2"	6000 psi @ 100 °F	4000 psi @ 100 °F	6000 psi @ 392 ºF	4000 psi @ 392 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KHP	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	10000 psi @ 100 °F	8000 psi @ 100 ºF	10000 psi @ 392 ºF	8000 psi @ 392 ºF	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KHR	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	10000 psi @ 100 ºF	8000 psi @ 100 ºF	10000 psi @ 212 <sup>0</sup> F	8000 psi @ 212 ºF	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KBP		Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4" Tube Stub 1/4" x .035 VCR Gland no nuts 1/4" VCR rotatable female 1/4" VCR rotatable male 1/4"	500 psi @ 100 <sup>0</sup> F	500 psi @ 100 <sup>0</sup> F	500 psi @ 392 <sup>0</sup> F	500 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KUF	Body	Brass (UNS C67500 / ASTM B138) Alloy 400 (UNS N04400 / ASTM B164) Alloy C-276 (UNS N10276 / ASTM B574)	Female NPT 1/4"	500 psi @ 100 <sup>0</sup> F	500 psi @ 100 ⁰F	500 psi @ 392 <sup>0</sup> F	500 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

	ure 1t		Maximum Rated Pressure					
Product Series	Main Pressure Bearing Component	Main Pressure Bearing	Port Connections and Sizes	At ambient temperature		At maximum temperature		Design Code of Construction
<b>a.</b>	Mair E Co	Material		Inlet	Outlet	Inlet	Outlet	
KFB	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/2"	250 psi @ 100 <sup>0</sup> F	250 psi @ 100 °F	250 psi @ 392 <sup>0</sup> F	250 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
КСВ	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/8"	375 psi @ 100 ⁰F	375 psi @ 100 <sup>0</sup> F	375 psi @ 392 <sup>0</sup> F	375 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
КРВ	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	3000 psi @ 100 ºF	3000 psi @ 100 °F	2975 psi @ 392 <sup>0</sup> F	2975 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
КНВ	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	8000 psi @ 100 ºF	8000 psi @ 100 °F	8000 psi @ 212 ºF	8000 psi @ 212 ºF	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KEV (diaphr agm)	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	3600 psi @ 100 ºF	500 psi @ 100 °F	3600 psi @ 392 ºF	500 psi @ 392 ºF	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KEV (piston)	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	3600 psi @ 100 °F	3000 psi @ 100 °F	3600 psi @ 392 ºF	2975 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
KSV	Body	Stainless Steel (UNS S31600 / ASTM A479)	Female NPT 1/4"	3600 psi @ 100 ºF	500 psi @ 100 <sup>0</sup> F	3600 psi @ 392 <sup>0</sup> F	500 psi @ 392 <sup>0</sup> F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

### **Product Illustration**



# **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:

PCTFE seat material PEEK seat material

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:

ASTM G93 Level-E cleaned Swagelok SC-11 cleaned Handle Type (e.g. knob, thumbwheel, etc) Panel Mounting

### **Quality System**

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2015. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The K Series Pressure Regulators are manufactured at a Swagelok Company locations in Solon, Ohio and Tromode, Isle of Man, British Isles.

#### References

The product catalog does not represent the full scope of registration, but rather details some of the most common options.

K Series Pressure Regulator Catalog MS-02-230, Rev Q