

TECHNICAL STANDARDS & SAFETY AUTHORITY

14th Floor, Centre Tower 3300 Bloor Street West Toronto, Ontario Canada M8X 2X4 Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below



7,100	ace, Vice President of Engineering (Name and Position, e.g. Préside	ent, Plant Manager, Chief Engineer)					
of Swagelok Co							
01		(anufacturer)					
Located at 29	cated at 29500 Solon Road, Solon, Ohio 44139-3492 (440) 248-460						
	(Plant Address)	(Telephone No.)	440-519-7384 (Fax No.)				
and Press	nly declare that the fittings listed hereunder, which sure Vessels Regulation, comply with all of the r 31.1 and ASME B31.3 for Unlisted Components	requirements of	ls and Safety Act, Boiler				
999	(Title of recognized Nort	h American Standard)					
which spec	cifies the dimensions, materials of construction, pressu	ure/temperature ratings, identification markin	g the fittings and service;				
pressure/t	emperature ratings and the basis for such ratings, hat the manufacture of these fittings is controlled b	attached data which identifies the dimension the marking of the fitting for identification by a quality system meeting the requirement	ns, material of construction and service.				
The home second	which has been verified by the following authority,		RADO POR MANON TO TO TO TO THE PARTY OF THE				
	by this declaration, for which I seek registration, are ca following information and/or test data are attached as		_ type fittings. In support of				
	Certificate, Catalog Information, Support Docum						
-	04100104104104104104	ns, test reports, etc.)					
the 5	day of Opril AD 2015	- •	of Chic				
Jami	(Signature) Jamie L Resident Por Notary Public, My Commission E	rtage County State of Ohio	eciarer)				
13.30	FOR OFFICE	USE ONLY					
Technical Standa	knowledge and belief, the application meets the required and Safety Act, Boilers and Pressure Vessels and is accepted for registration in Category		(II) CLA				
	CSA-0C18924.56	CRN: CSA-OCI	8924.56				
CRN:							
CRN: Registered by:	R.W.BARNES MAY 30, 2017	Registration Process ad CSA Group per CSA B5					



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7/20/13 Rev: 9/12/16

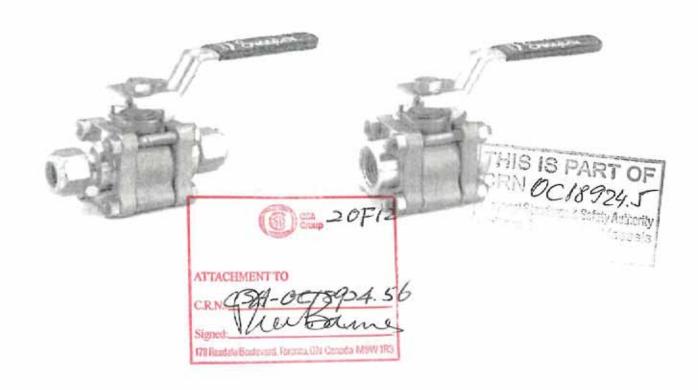
Attachment B1. Scope for Swagelok Special Alloy 60 Series Ball Valves (Category C)

This document represents the scope of the Swagelok Special Alloy 60 Series Ball Valves covered by this submission for CRN approval. The Swagelok Special Alloy 60 Series Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Description or Series	Main Pressure	Main Pressure	Port Connections and Sizes	Maximum Ra	ated Pressure	Design Code of Construction
	Bearing Component	Bearing Material (Standard)		At ambient temperature	At maximum temperature	
63		Stainless Steel 6MO (ASTM A276 UNS S31254)	Swagelok Tube Fitting 1/2" Female NPT 1/2"	2,200 psi @ 100 °F	100 psi @ 450 °F	ASME B31.1 (Unlisted Components and ASME B31.3 (Unlisted Components)
	Body	(ASTM A479 Female N UNS S32750)	Swagelok Tube Fitting 1/2" Female NPT 1/2"	2,200 psi @ 100 °F	100 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
	,	Alloy 825 (ASTM B425 UNS N08825)	Swagelok Tube Fitting 1/2* Female NPT 1/2*	2,200 psi @ 100 °F	100 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
			Alloy 625 (ASTM B446 UNS N06625)	Swagelok Tube Fitting 1/2" Female NPT 1/2"	2,200 psi @ 100 °F	100 psi @ 450 °F

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok Tubing Data, MS-01-107.



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Product Options:

The product options listed below affect pressure and/or temperature ratings shown in the above Summary Table, but in all cases the ratings are less than those shown in the table.

Flange Seal Material Options

Fluorocarbon, FKM
Buna N
Buna C
Ethylene Propylene
Neoprene
Grafoil
PTFE

Stem Seal Material Options

PTFE, virgin Fluorocarbon, FKM Buna C Ethylene Propylene Grafoil

Seat Material Options

PTFE, virgin
PTFE, reinforced
PTFE, carbon glass filled
PEEK
UHMWPE



Additional options and non-pressure boundary alterations that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include the following:

Handle options
Actuators (e.g. pneumatic, electric)
Panel mounting
Low dead space inserts

Low dead space inserts

All of the above options, those that affect pressure and/or temperature ratings and those that do not, are within the scope of this approval.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Special Alloy 60 Series Ball Valves products are made 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.

60 Series Ball Valves – Special-Alloy Fluid System Components Catalog MS-02-439

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Attachment B2. Scope for Swagelok Special Alloy 83 Series Ball Valves (Category C)

This document represents the scope of the Swagelok Special Alloy 83 Series Ball Valves covered by this submission for CRN approval. The Swagelok Special Alloy 83 Series Ball Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

or Series	Main Pressure	Main Pressure Bearing Material (Standard)	Port Connections and Sizes	Maximum Rated Pressure		
	Bearing Component			At ambient temperature	At maximum temperature	Design Code of Construction
83 Body	Body	Stainless Steel 2507 (ASTM A479 UNS S32750)	Swagelok Tube Fitting 1/4", 3/8", 1/2", 6MM, 8MM, 10MM, 12MM Female NPT 1/8", 1/4", 1/2"	9 6,000 psi 500 ps	500 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
	Alloy 825 (ASTM B425 UNS N08825)	Swagelok Tube Fitting 1/4", 3/8", 1/2", 6MM, 8MM, 10MM, 12MM Female NPT 1/8", 1/4", 1/2"	6,000 psi @ 100 °F	500 psi @ 450 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)	

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok Tubing Data, MS-01-107.





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Product Options

Additional options that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include 3-way valves, seat materials, stem seal materials, actuators.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. Special Alloy 83 Series Ball Valves products are made 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.

83 Series Ball Valves – Special-Alloy Fluid System Components Catalog MS-02-357

ATTACHMENT TO

CIRN SA - QC18934.16

Signed:

173 Rextate Boulevard, Toronta, GN Canada MSW 1R3

CRN OC 18924.5

Attachment B3. Scope for Swagelok Specal Alloy Bleed Valves (Category C)

This document represents the scope of the Swagelok Special Alloy Bleed Valves covered by this submission for CRN approval. The Swagelok Special Alloy Bleed Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Description or Series	Main Pressure	Main Pressure	Port Connections and Sizes	Maximum Rated Pressure		No toxy training
	Bearing Component	Bearing Material (Standard)		At ambient temperature	At maximum temperature	Design Code of Construction
BV	Body	Stainless Steel 2507 (ASTM A479 UNS S32750)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 °F	8,965 psi @ 482 °F	ASME B31.1 (Unlisted Components and ASME B31.3 (Unlisted Components
		Alloy 625 (ASTM 8446 UNS N06625)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 ⁰ F	7,490 psi @ 850 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
		Alloy 825 (ASTM B425 UNS N08825)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 °F	7,295 psi @ 850 °F (Note 1)	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)
			Hastelloy C (ASTM B574 UNS N10276)	Male NPT 1/4", 3/8", 1/2"	10,000 psi @ 100 °F	6,155 psi @ 850 °F

Notes:

(1) For ASME B31.1 applications, this product is rated to 7,295 psi @ 800°F.



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:

Typical Options Handles Vent Tubes

Additional options and non-pressure boundary alterations that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include handle options, actuator options, etc.

Quality System

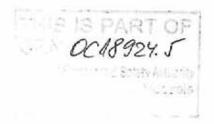
The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Special Alloy Bleed Valves products are made 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.

BV Bleed Valves - Special Alloy Materials Catalog MS-02-356





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Attachment B4. Scope for Swagelok Special Alloy CH Series Check Valves (Category C)

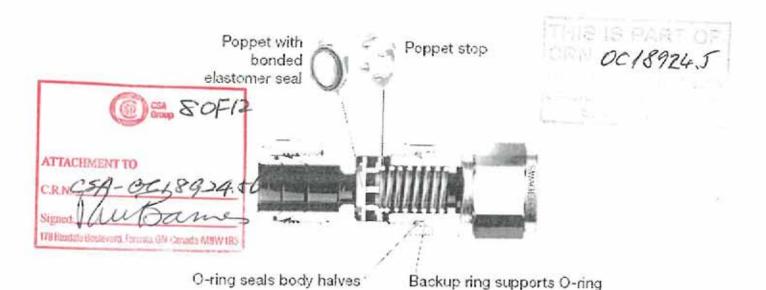
This document represents the scope of the Swagelok Special Alloy CH Series Check Valves covered by this submission for CRN approval. The Swagelok Special Alloy Check Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Description or Series	Main Pressure	Bearing Material	Port Connections and Sizes	Maximum Rated Pressure		
	Bearing Component			At ambient temperature	At maximum temperature	Design Code of Construction
СН		Alloy 625 (ASTM B446 UNS N06625)	Swagelok Tube Fitting 1/4", 3/8", 1/2" Female NPT 1/4", 3/8", 1/2" Male NPT 1/4", 3/8", 1/2"	6,000 psi @ 100 °F	5070 psi @ 400 °F	ASME B31.1 (Unlisted Components and ASME B31.3 (Unlisted Components
	Alloy 825 Body (ASTM B425 UNS N08825)	Swagelok Tube Fitting 1/4", 3/8", 1/2" Female NPT 1/4", 3/8", 1/2" Male NPT 1/4", 3/8", 1/2"	6,000 psi ① @ 100 °F	4995 psi @ 400 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)	
		Stainless Steel 2507 (ASTM A479 UNS S32750)	Stainless Steel 2507 Swagelok Tube Fitting 1/4", 3/8", 1/2" Female NPT 1/4", 3/8", 1/2"	6,000 psi @ 100 °F	5455 psi @ 400 °F	ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components)

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok Tubing Data, MS-01-107.

①Pressure ratings for valves with 1/2 in, female NPT end connections limited to 5700 psig (392 bar).



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Product Options:

Additional options that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include poppet springs and body seal materials.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Special Alloy Bleed Valves products are made 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.

Check Valves – Special Alloy Materials – CH Series Catalog MS-02-440



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Attachment B5. Scope for Swagelok Special Alloy N and HN Series Needle Valves (Category C)

This document represents the scope of the Swagelok Special Alloy N and HN Needle Valves covered by this submission for CRN approval. The Swagelok Special Alloy N and HN Needle Valves were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

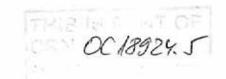
Product Description or Series	Main Pressure	Main Pressure	Port Connections and	Maximum Ra	ated Pressure	
	Bearing Component	Bearing Material Sizes Sizes	At ambient temperature	At maximum temperature	Design Code of Construction	
3N Bo		Stainless Steel 2507 (ASTM A479 UNS S32750)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	6,000 psi @ 100 °F	5,370 psi @ 482 °F	ASME B31.1 (Unlisted Components ASME B31.3 (Unlisted Components
	200)	Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	6,000 psi @ 100 °F	4,250 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components ASME B31.3 (Unlisted Components
6N Body	Body	Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/4", 3/8" Swagelok Tube Fitting 3/8", 1/2", 10MM, 12MM	6,000 psi @ 100 °F	4,250 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components ASME B31.3 (Unlisted Components
		Stainless Steel 6MO (ASTM A182 UNS S31254)	Female NPT 1/4", 3/8" Swagelok Tube Fitting 3/8", 1/2", 10MM, 12MM	6,000 psi @ 100 °F	3,860 psi @ 750 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
12N	Body	Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/2", 3/4", 1" Male NPT 1/2", 3/4", 1" Swagelok Tube Fitting 1/2", 3/4", 12MM	6,000 psi @ 100 °F	4,250 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
		Stainless Steel 6MO (ASTM A182 UNS S31254)	Female NPT 1/2", 3/4", 1" Male NPT 1/2", 3/4", 1" Swagelok Tube Fitting 1/2", 3/4", 12MM	6,000 psi @ 100 °F	3,860 psi @ 750 °F	ASME 831.1 (Unlisted Components) ASME 831.3 (Unlisted Components)

Notes:

(1) For ASME B31.1 applications, this product is rated to 4,380 psi @ 800°F.

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok® Tubing Data, MS-01-107.





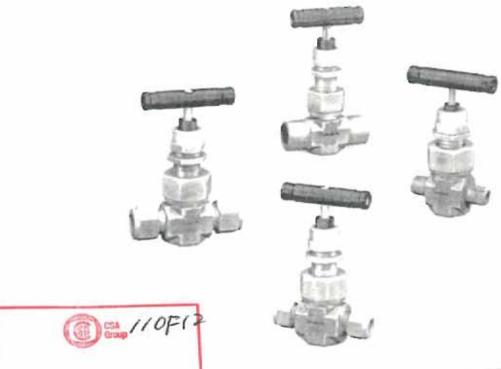
Product Description or Series	Main	Bearing Material	Port Connections and Sizes	Maximum Ra	ated Pressure	Design Code of Construction
	Pressure Bearing Component			At ambient temperature	At maximum temperature	
3HN Body	B	Stainless Steel 2507 (ASTM A479 UNS S32750)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	10,000 psi @ 100 °F	8,960 psi @ 482 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)
	Alloy 825 (ASTM B425 UNS N08825)	Female NPT 1/8", 1/4" Male NPT 1/4" Swagelok Tube Fitting 1/4", 6MM	10,000 psi @ 100 °F	7,080 psi @ 1000 °F (Note 1)	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)	
6HN	Body	2507 (ASTM A479 UNS S32750)	Female NPT 1/4", 1/2" Male NPT 1/2" Swagelok Tube Fitting 3/8", 1/2"	10,000 psi @ 100 °F	8,960 psi @ 482 °F	ASME B31.1 (Unlisted Components) ASME B31.3 (Unlisted Components)

Notes:

(1) For ASME B31.1 applications, this product is rated to 7,295 psi @ 800°F.

For more information about pressure ratings of valves with tube fitting end connections, see Swagelok® Tubing Data, MS-01-107.

Product Illustrations



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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. All of the following options are within the scope of this registration:

Typical Options Handles Vent Tubes

Additional options and non-pressure boundary alterations that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include handle options, actuator options, etc.

Product Options

Additional options that do not affect pressure-temperature ratings may be made available within the scope of this registration. Examples of these would include stem packing seal materials, stem tip, and handle options.

Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. Special Alloy N and HN Needle Valve products are made 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.

N, HN Bleed Valves - Special Alloy Materials Catalog MS-02-365



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