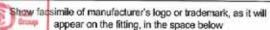


Technical Standards and Safety Authority
345 Carlingview Discard Start Authority
Toronto, Onlario M9W 6N9
www.tssa.org CRN: CSA - OH 20020, 56





Registration Process administered by STATITORY DECLARATION

	on of Fittings	
I, David H. Peace, Vice President of Engineering		
(Name and Position, e.g. President, P.	Hant Manager, Chief Engineer)	
of Swagelok Company		
(Name of Manua	facturer)	
Located at 29500 Solon Road, Solon, Ohio 44139 USA	(440) 248-4600	(440) 349-5970
(Plant Address)	(Telephone No.)	(Fax No.)
do solemnly declare that the fittings listed hereunder, which are and Pressure Vessels Regulation, comply with all of the requ	irements of	
ASME B31.1 for unlisted components where applicable and		ts where applicable
(Title of recognized North Am which specifies the dimensions, materials of construction, pressure/t		a the fittings and service:
		50 S
or are not covered by the provisions of a recognized North Am	erican standard and are therefore ma	anufactured to comply with
pressure/temperature ratings and the basis for such ratings, the	ched data which identifies the dimension marking of the fitting for identification.	ns, material of construction and service
I further declare that the manufacture of these fittings is controlled by a		ents of ISO 9001:2015
which has been verified by the following authority, BS	The state of the s	
The items covered by this declaration, for which I seek registration, are categorated this application, the following information and/or test data are attached as follows:		_ type fittings. In support of
ISO 9001:2015 Certificate, Attachment A, Attachment B, Product C		ents
(drawings, calculations, to		
the 13th day of November AD 20 17.	the State	of Ohio
Commissioner for Oaths:		
(Printed name) (Printed name) (Postous Immediate Resident Portage County Hotary Public, State of Ohio No Commission Expires: 03/06/	nans Management	eclarer)
FOR OFFICE US	SE ONLY	
To the best of my knowledge and belief, the application meets the requirer	ments of the	
Technical Standards and Safety Act, Boilers and Pressure Vessels Reg	gulation, and	(A) ==
CSA Standard B51 and is accepted for registration in Category	REGISTERED	(E) :==
CSA - OH 20020,56	CRN: CSA-OH 2	20020.56
Registered by: A . BA NWATT	Registration Process	administered by
Dated: APRIL . 09 . 2018	CSA Group per CSA B	
NOTE: This registration expires on:JAN -31 - 202	8	

CSA Croup Canadian Registration Number Submittal #FDH-2017 Category H: Swagelok Fluid Distribution Header November 10, 2017 Page 1 of 3

Attachment B. Scope of Registration for Swagelok Fluid Distribution Headers (FDH) (Category H)

Product Scope

This document represents the scope of Swagelok® Fluid Distribution Headers covered by this submission for CRN approval. These products have been evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted components.

Summary Table

Product Series	Main Pressure Bearing Component	Main Pressure Bearing Material (Standard)	End Cap/Body Connections and Sizes	Maximum Allowable Working Pressure (psig)		Design Code of
				@100°F	@Max. Temp	Construction
FDH1 (1" pipe platform)	Body (Extrusion) %" female NPT ends Or End Caps on straight threads	316 SS bar (ASTM A479)	Inlet Connections: Swagelok tube fitting 1/2", 3/4", 1", 12mm, 25mm Female NPT 3/8", 1/2," 3/4" Swagelok Tube Adapter 3/8", 1/2", 3/4", 1" Outlet Connections: Swagelok Tube Fitting 1/4", 1/2", 6mm, 10mm, 12 mm, 25 mm Female NPT 1/4", 3/8" 1/2" Swagelok Tube Adapter 1/4", 3/8", 1/2", 3/4"	3000 psig	2145 psi @ 400°F	ASME B31.1 (Unlisted Components) And ASME B31.3 (Unlisted Components)
FDH2 (2" pipe platform)	Body (Extrusion) and End Caps	316 SS bar (ASTM A479)	Inlet Connections Swagelok Tube Fitting 3/4", 1", 2", 25mm, 50mm, Female NPT 1/2," 3/4", 1" Swagelok Tube Adapter 3/4, 1", 2" Outlet Connections Swagelok Tube Fitting 3/8", 1/2", 3/4", 1", 10mm, 12 mm, 25 mm Female NPT 3/8" 1/2", 3/4", 1" Swagelok Tube Adapter 3/8", 1/2",3/4"	1000 psig	715psi @ 400°F	



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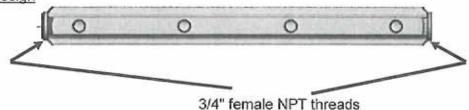
Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

Swagelok

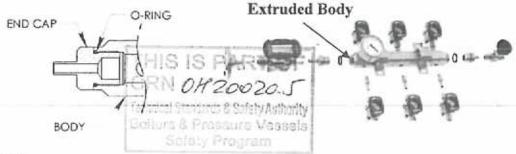
Canadian Registration Number Submittal #FDH-2017 Category H: Swagelok Fluid Distribution Header November 10, 2017 Page 2 of 3

Product Illustrations





FDH2 and Optional FDH 1 Design



Configurations

The Swagelok Fluid Distribution Header (FDH) is a pre-engineered and fully documented piping assembly that can act as a distribution manifold or collection manifold in gas or liquid applications. The main pressure-bearing component is an extruded manifold body that may or may not include an end-cap at the inlet and outlet ends, as explained below. When end caps are used, they are connected to the body with straight threads and O-ring seals.

FDH assemblies are available in two sizes – the FDH1 is a one-inch pipe platform and the FDH2 is a two-inch pipe platform. The FDH can be ordered with two to 18 branch outlets, where valves and other system components are connected to the branch outlets with tapered pipe threads. Swagelok offers a variety of system components to connect to the manifold body and/or end cap assemblies.

The pressure rating of the total piping assembly is the lowest pressure rating of any valve or other system component connected to the body. The scope of this registration is only for the extruded body with 3/4" NPT ends or the extruded body and end cap assemblies.

Product Options:

Fluid distribution headers are common components for a variety of gas and liquid applications. A wide variety of product options such as clamps or various system components can be attached to manifold body and end-cap assemblies to create subsystems for conveying systems or gases. These options do not affect the pressure or temperature ratings of the body or body and end cap assemblies within the scope of this CRN registration.

Swagelok

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Quality System

The Swagelok Company quality system for Fluid Distribution Headers 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.

References

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

Fluid Distribution Header Catalog MS-02-358

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Attachment A. Swagelok Manufacturing Locations

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

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) 26653 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Alfred) 29500 Ambina Drive Solon, Ohio 44139 Swagelok Company (Strongsville) 15400 Foltz Road Strongsville, Ohio 44119		
Swagelok Hose Services Company (SHSC) 29900 Solon Industrial Parkway Solon, Ohio 44139			
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 Fromode M4 4RA sle of Man	77110 10 71		
S and	THIS IS PART OF		

ATTACHMENT TO

C.R.N. C.JA - CHOOLE ST

Signed: 2845 VECU

178 Reschola Boctoverd. Toronico. UN Chinada MSW 1873

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