

NEW BRUNSWICK
NUNAVUT

NOVA SCOTIA
YUKON

PRINCE EDWARD ISLAND
NORTHWEST TERRITORIES

NEWFOUNDLAND AND LABRADOR

MANUFACTURERS NAME: Swagelok Company

MANUFACTURERS ADDRESS: 29500 Solon Road, Solon, Ohio 44139 USA

PLANT LOCATIONS: Headquarters: 29500 Solon Road, Solon, Ohio 44139 USA (See Attachment A)

CATEGORY OF FITTINGS TO BE REGISTERED. CIRCLE ONE CATEGORY ONLY

A Pipe fittings, including couplings, tees, elbows, Ys, plugs, unions, pipe caps, or reducers
 B Flanges: all flanges
 C Valves: all line valves
 D Expansion joints, flexible connections, and hose assemblies: all types
 E Strainers, filters, separators, and steam traps
 F Measuring devices, including pressure gauges, level gauges, sight glasses, levels, or pressure transmitters
 G Certified capacity-rated pressure relief devices acceptable as primary over pressure protection on boilers, pressure vessels, piping and fusible plugs
 H Pressure retaining components that do not fall into one of the above categories
 N Nuclear-components: Class 1 Class 2 Class 3 . (Meeting AECB or ASME requirements)

TITLE OF THE STANDARD OF CONSTRUCTION
ASME B31.1 and ASME B31.3 (for unlisted components)

SHOW MANUFACTURERS NAME, TRADEMARK, OR LOGO AS IT WILL APPEAR ON THE PRODUCT

TYPE OF CONSTRUCTION
 FORGED WELDED WROUGHT
 CAST OTHER
 DESCRIBE OTHER:

LIST OF SUPPORTING DOCUMENTATION AND IDENTIFICATION OF THE ACTUAL ITEMS TO BE REGISTERED:
ISO 9001:2015 Certificate, Attachment A, Attachment B, Product Catalog and other supporting documents

DECLARATION:

I David H. Peace (see note 3) employed by Swagelok Company and being the person having full authority and responsibility for the quality of the end product do solemnly declare that the information contained in this form is true and to the best of my knowledge represents the product for which registration is sought. The dimensions, materials of construction, pressure temperature ratings, and identification markings are in accordance with the herein named standards. I further declare that the manufacture of these fittings is regulated by a Quality Control Program which extends to each plant where fabrication occurs in whole or in part and has been verified by BSI as being suitable for that purpose and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

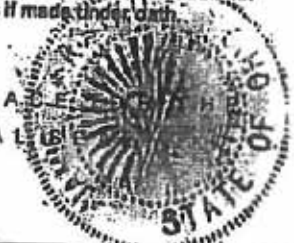
Signature of Declarer: [Signature]

Declared before me at Solon, Ohio

This 13th day of November AD 2017

Commissioner of Oaths or Notary Public: (sign) [Signature]

USE THIS SPACE
Jamie L. Rustan
Resident Portage County
Notary Public, State of Ohio
My Commission Expires: 03/08/2020



This space for Regulatory Authority use

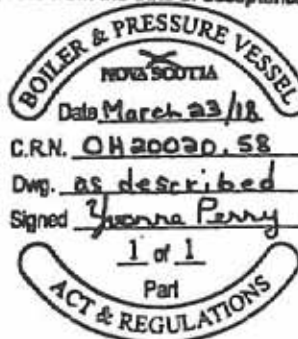
This registration must be revalidated after ten (10) years from the date of acceptance.

CRN: OH20020.5

FID#: 1214

Notes:

- All fittings shall be registered in the name of the Manufacturer.
- Each category shall be supported with two Statutory Declaration forms and one copy of supporting documentation.
- The declaration shall be made by the person having full authority and responsibility for the quality of the end product.
- Quality control programs shall be resubmitted for validation at a maximum interval of five (5) years.



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.

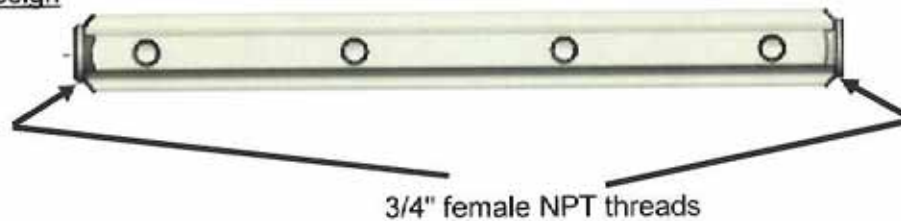
Summary Table

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 Construction
				@100°F	@Max. Temp	
FDH1 (1" pipe platform)	Body (Extrusion) 3/4" 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
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	ASME B31.3 (Unlisted Components)

THIS IS PART OF
 CRN 04200205
 Technical Standards & Safety Authority
 Boilers & Pressure Vessels
 Safety Program

Product Illustrations

Primary FDH1 Design



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..

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:

- o Fluid Distribution Header Catalog MS-02-358



Attachment A. Swagelok Manufacturing Locations

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

Swagelok Company 29500 Solon Road Solon, Ohio 44139 USA	Swagelok Company (Falon 1) 348 Bishop Road Highland Heights, Ohio 44143 USA
Swagelok Company (Highland) 318 Bishop Road Highland Heights, Ohio 44143 USA	Swagelok Company (Falon 2) 358 Bishop Road Highland Heights, Ohio 44143 USA
Swagelok Company (OFC) 29495 F.A. Lennon Drive Solon, Ohio 44139 USA	Swagelok Company (HPF) 6050 Cochran Road Solon, Ohio 44139 USA
Swagelok Company (Atlantic) 26651 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Snow Metal) 6060 Cochran Road Solon, Ohio 44139 USA
Swagelok Company (Micro) 26653 Curtiss Wright Parkway Willoughby Hills, Ohio 44092 USA	Swagelok Company (Alfred) 29500 Ambina Drive Solon, Ohio 44139
Swagelok Hose Services Company (SHSC) 29900 Solon Industrial Parkway Solon, Ohio 44139	Swagelok Company (Strongsville) 15400 Foltz Road Strongsville, Ohio 44119
Swagelok (China) Fluid System Technologies Ltd. Changshu Export Process Zone Changshu Economic Development Zone Changshu, Jiangshu 215513 China	Swagelok Company A.G. (European Technology Center) St. GallerstraBe 84 Lachen, Switzerland 8853 Switzerland
Swagelok Limited Tromode IM4 4RA Isle of Man	

