

# Low Pressure Header

**Lightweight, all-welded tubular construction**

**Ideal for air, water, steam, and inert gases**

**Easily mounted using standard tube supports**

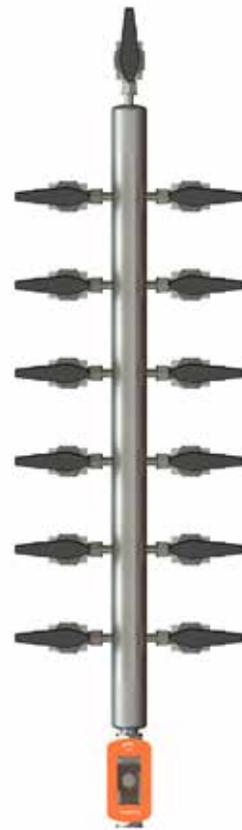
**Available with 4 to 16 branch outlets to provide flexibility**

The Swagelok low pressure header (LPH) is a manifold that provides a means of distributing or collecting a system fluid using a lightweight, 316 stainless steel body. An LPH connects several users to the system fluid.

An LPH is characterized by an inlet on one end, a drain connection or cap on the other end, and multiple outlets on the sides. There are several options available for the connections and outlets.

For potentially wet gases, such as compressed air or steam, install the LPH vertically with a drain valve at the bottom.

For liquid service, install the LPH vertically with the supply entering at the bottom. The top valve will act as a vent for removing trapped air or allowing air in for draining the LPH during maintenance.



**LPH shown with 40 series ball valve on the inlet connection, 60 series ball valve on the drain connection, and 12 outlet ports with 40 series ball valves installed**

**Swagelok®**

## Pressure-Temperature Ratings

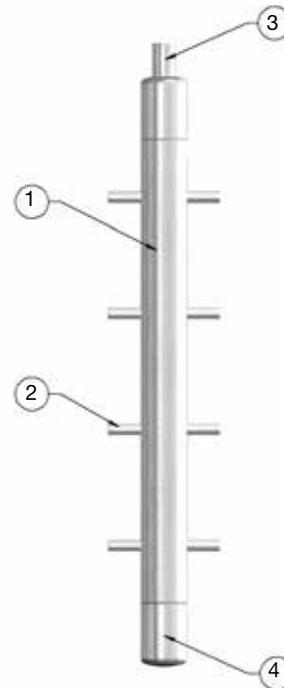
<b>Body Rating With Tube Stub Inlet End Connection</b>	580 psig (40.0 bar) at -65 to 600°F (-53 to 315°C)
<b>Body Rating With Flanged Inlet Connection</b>	275 psig (19.0 bar) at -20°F (-29°C)  140 psig (9.6 bar) at 600°F (315°C)  See the <i>Flange Adapters</i> catalog, MS-02-200, for additional flange rating information.

The rating of the welded LPH body will be laser marked on the body. The rating of the finished LPH assembly will be based on the ratings of the body and the valves selected for the inlet, outlet, and drain. The valve with the lowest pressure rating at any given temperature determines the pressure rating. The valve with the most restrictive temperature rating determines the temperature rating.

See **Ordering Information** for the availability of valve series for inlet, outlet, and drain functions.

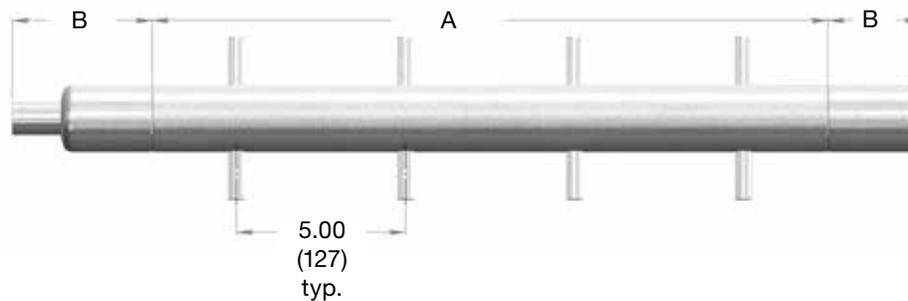
## Materials of Construction

Component	Material/Specification
<b>1</b> Body	2 in. OD × 0.065 in. wall 316/316L stainless steel welded tubing
<b>2</b> Outlet Port	1/2 in. OD × 0.049 in. wall 316/316L stainless steel seamless tubing
<b>3</b> Inlet and drain port	316/316L stainless steel seamless tubing (see Ordering Information for inlet and drain connections available)
<b>4</b> Cap	316L stainless steel
<b>5</b> Flange (optional, not shown)	316L stainless steel



## Dimensions

Dimensions, in inches (millimeters), are for reference only.



Number of Ports	A in. (mm)
4	10.0 (254)
6	15.0 (381)
8	20.0 (508)
12	30.0 (762)
16	40.0 (1016)

End Connection Style	B in. (mm)
1 in. NPS 150# ASME Flange	4.57 (116)
2 in. NPS 150# ASME Flange	2.82 (71.6)
1/2 in. OD × 0.049 in. wall tube stub	4.17 (106)
1 in. OD × 0.083 in. wall tube stub	4.39 (112)
2 in. OD × 0.188 in. wall tube stub	3.00 (76.2)
Cap	2.75 (69.8)

## Testing

Every welded LPH body is helium leak tested to a maximum leak rate of  $1 \times 10^{-5}$  cm<sup>3</sup>/sec at the factory.

## Ordering Information

Build an LPH ordering number by combining the designators in the sequence shown below.

1    2    3    4    5    6    7  
LPH2 - 08 - Z 0 - X 0 - ZZ 0

### 1 Number of Branches

- 04 = 4 branches
- 06 = 6 branches
- 08 = 8 branches
- 12 = 12 branches
- 16 = 16 branches

### 2 Inlet Connections

- H = 1/2 in. Swagelok tube fitting
- K = 1 in. Swagelok tube fitting<sup>①</sup>
- L = 2 in. Swagelok tube fitting<sup>①</sup>
- T = 1 in. NPS ASME class 150 flange<sup>②</sup>
- U = 2 in. NPS ASME class 150 flange<sup>②</sup>
- X = 1/2 in. × 0.049 in. tube stub<sup>②</sup>
- Z = 1 in. × 0.083 in. tube stub<sup>②</sup>
- AA = 2 in. × 0.188 in. tube stub<sup>②</sup>

① Available with no inlet valve or 60 series valve only.

② Available with no inlet valve only.

### 3 Inlet Valve

- 0 = No valve
- 1 = 40 series ball valve
- 2 = 60 series ball valve with PTFE seats
- 3 = 1/18 series integral bonnet needle valve
- 4 = P4T/P6T series plug valve

### 4 Outlet Connections

- H = 1/2 in. Swagelok tube fitting
- X = 1/2 in. × 0.049 in. tube stub<sup>②</sup>

② Available with no outlet valve only.

### 5 Outlet Valve

- 0 = No valve
- 1 = 40 series ball valve
- 2 = 60 series ball valve with PTFE seats
- 3 = 1/18 series integral bonnet needle valve
- 4 = P4T/P6T series plug valve

### 6 Drain Connection

- H = 1/2 in. Swagelok tube fitting
- K = 1 in. Swagelok tube fitting<sup>①</sup>
- X = 1/2 in. × 0.049 in. tube stub<sup>②</sup>
- Z = 1 in. × 0.083 in. tube stub<sup>②</sup>
- ZZ = Cap

① Available with no drain valve or 60 series valve only.

② Available with no drain valve only.

### 7 Drain Valve

- 0 = No Valve
- 1 = 40 series ball valve
- 2 = 60 series ball valve with PTFE seats
- 3 = 1/18 series integral bonnet needle valve
- 4 = P4T/P6T series plug valve

## Additional Information

*Ball Valves, General Purpose and Special Application 60 Series, MS-01-146*

*Flange Adapters, MS-02-200*

*Gaugeable Tube Fittings and Adapter Fittings, MS-01-140*

*Integral Bonnet Needle Valves, O, 1, 18, 20, and 26 Series, MS-01-164*

*One-Piece Instrumentation Ball Valves, 40G and 40 Series, MS-02-331*

*Plug Valves P4T and P6T Series, MS-01-59*

## Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit [swagelok.com](http://swagelok.com) or contact your authorized Swagelok sales and service representative.

### Safe Product Selection

**When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.**

*Contact your authorized Swagelok sales and service representative for more details.*

*This product is just one example of our problem-solving capabilities. Your local authorized Swagelok sales and service representative, along with regional technology centers and trained field engineers, are at your service to create a solution that meets the needs of your application.*

