

MAHLE

Industry

Cartridge Filter Housings Nowata 1S Series

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High Pressure, Carbon Steel Filters for Industrial Liquid and Gas Applications
Waterflood Operations, Pollution Control, Glycol Dehydrator Filtration

1. Introduction

The 1S series cartridge filter housings are available in 1, 2, 3 or 4 cartridge length models. These filters are ideal for many high pressure, low volume applications. All models are made of carbon steel and have a 2000 psi working pressure. These filters are commonly used by the petroleum production industry in secondary recovery water flood applications. A filter is normally placed at each individual input well just ahead of the meter. The cast steel head mounts directly in the flow line. The filter may be mounted in any position. The fluid or gas enters one side of the head and is channeled to the area around the cartridge. The fluid or gas passes through the depth type cartridge into the center tube and out the other side of the head. The direction of flow, from dirty inlet to clean outlet, is indicated by an arrow cast in the filter head. The body is connected to the head by a two bolt, grooved coupling and sealed with a double lip gasket.

All 1S series models are made of carbon steel. For added corrosion resistance, the 1SP series models are available with epoxy lined, carbon steel bodies. Each model is equipped with a 1/4 inch internal pipe thread drain in the bottom of the body. The 1S series is well suited for many filter applications requiring low cost, durable, easily operated filters.

Features

- Available in 1, 2, 3 or 4 cartridge length models
- 2000 psi working pressure
- Cast carbon steel head
- Carbon steel or epoxy lined carbon steel body
- Brass or carbon steel internals
- Grooved closure
- Buna gasket
- Gas or fluid filtration
- Water flow rates to 24 gpm
- Glycol flow rates to 15 gpm
- 1" internal pipe thread inlet/outlet connections
- 1/4" internal pipe thread drain is standard
- Optional 1/4" internal pipe thread differential pressure ports



2. Standard Construction for 1S and 1SP Series Housings

Nowata 1S Series

The carbon steel cast head has 1 inch, in-line, internal pipe thread inlet and outlet connections. The unit's tubular body is also made of carbon steel. The head and body are connected by a two bolt, grooved coupling and a Buna gasket. The standard material for the internal fittings, center tube and retainer is brass, ideal for water applications. Optional carbon steel internals are also available for glycol applications. All models have a 2000 psi working pressure at a maximum temperature of 250 °F.

Nowata 1SP Series

The 1SP series has all of the same construction features as the 1S series with the addition of epoxy lining to the tubular steel body. The epoxy lined body should be used when the corrosion rate is great enough to considerably shorten the life of the plain steel units. The 1SP models are normally used for salt water and mildly corrosive fluids. For information on filters with 316 stainless steel construction, see the 1U series datasheet.

3. Optional Construction Features

Body Drain

All 1S and 1SP models have, as standard, a 1/4" internal pipe thread drain in the body. Models are also available with a 1/2" internal pipe thread drain on special order.

Differential Pressure Connections

Two 1/4" internal pipe thread connections in the head are available on special order. They can be used for two gauges or a DP indicator to monitor cartridge performance.

Gasket Material

Buna gasket is provided as standard. Other materials are available.

Internal Materials

Standard internals are made of brass. Optional plated carbon steel internals are also available. Other materials such as 316 stainless steel are available by special order.

Non-Code Construction

The 1S series is not available with ASME Code Stamp due to the use of the grooved coupling closure system.

See the 1SY series datasheet for ASME Code construction.

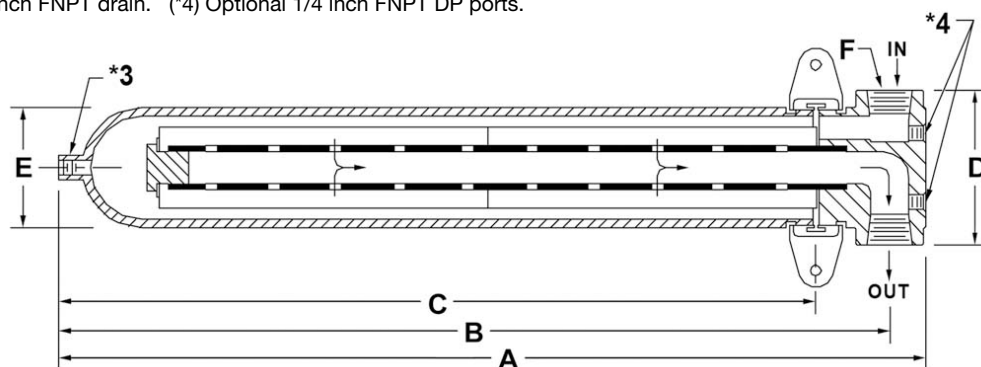
4. Dimensional Information

Model	Number of Cartridges	Shipping Weight (lbs)	A	B	C (*1)	D	E (*2)	Inlet/Outlet F
1S1N 1SP1N	1	19	16	15	11-1/2	4-1/2	3-1/2	1" FNPT
1S2N 1SP2N	2	27	26	25	21-1/2	4-1/2	3-1/2	1" FNPT
1S3N 1SP3N	3	35	36	35	31-1/2	4-1/2	3-1/2	1" FNPT
1S4N 1SP4N	4	43	46	45	41-1/2	4-1/2	3-1/2	1" FNPT

Dimensions shown in inches unless otherwise stated. Specifications are for reference only and subject to change without notice.

NOTES: (*1) Additional clearance required to remove housing body. (*2) Body Diameter.

(*3) 1/4 inch FNPT drain. (*4) Optional 1/4 inch FNPT DP ports.



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