

# 2" to 8" In-Line Series

Bulletin SS03039 Issue/Rev. 0.9 (4/21)

## Smith Meter® Strainers

The Smith Meter In-Line Strainers provide necessary protection for metering systems against dirt and other foreign material and are available in straight-through type (2" to 8") and angle type (4" and 6").



### Features

- Removable basket for easy cleaning
- Meets design requirements of the American Society of Mechanical Engineers (ASME) code B31.3
- NACE MR0175 compliant for products with hydrogen sulfide concentrations
- Includes 0.50" National Pipe Tapers thread (NPT) differential pressure taps on the nozzles
- Provides 1.50" NPT cover vent connection for mounting on an air-release kit for static air elimination
- Compliance with ASME code B16.5 regarding raised-face flanges is standard
- Operates in both vertical and horizontal positions
- Contains a basket seal

### Optional Features

- Air-release kit for static air elimination
- Basket differential pressure gauge kit with isolation valves to monitor basket cleanliness
- Delta pressure ( $\Delta P$ ) gauge reed-type switch kit, adjustable from 0 to 30 pound-force per square inch (psi) (0-207 kilopascal (kPa)) for remote indications

### Operating Specifications

#### Maximum Working Pressure

Flange Class	Working Pressure <sup>1</sup> psi (kPa)
150	285 (1,965)
300	740 (5,102)

<sup>1</sup> Maximum working pressures are for temperatures of -20 °F to 100 °F (-28 °C to 38 °C). Operating temperatures around 100 °F (38 °C) affect allowable working pressure. Consult factory for allowable working pressures at required operating temperatures.

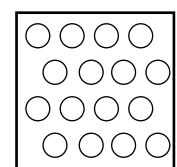
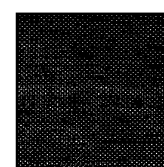
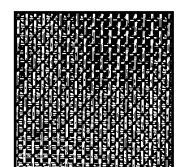
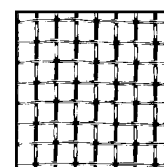
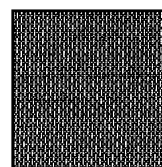
### Temperature Range

Seal Material	Range
Garlock	-20 °F to 400 °F (-29 °C to 204 °C)

### Strainer Baskets

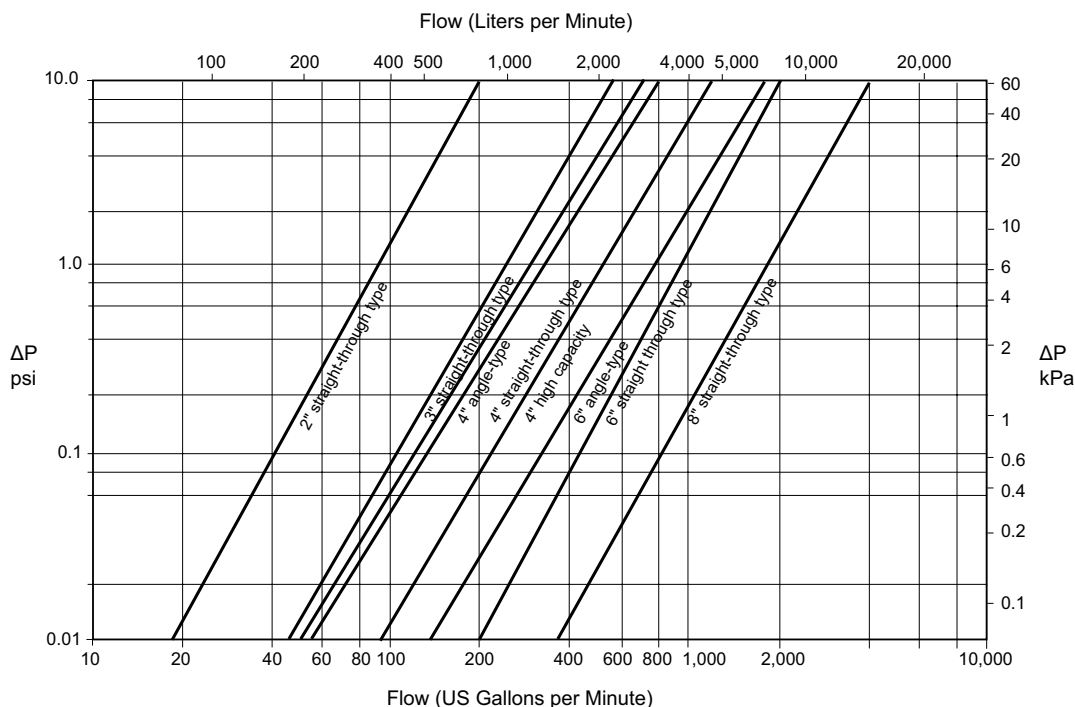
	Opening Size Inches (mm)	Percent Open Area Through Inner and Outer Baskets
<b>Permanent Liner</b>		
10	0.075 (1.91)	40.5%
20	0.036 (0.91)	37.3%
40 (standard)	0.015 (0.38)	25.9%
60	0.0082 (0.21)	24.2%
80	0.007 (0.18)	22.6%
<b>No Liner</b>		
Perforated plate	0.125 (3.17)	40.0%

Screens are shown actual size.



Basket burst pressure is 50 psi differential.

## Pressure Drop with 40 Mesh Liner



To approximate pressure drop for strainers with other than 40 mesh baskets, multiply chart reading by the appropriate factor.

Mesh	Factor
Perforated Plate	.65
10	.75
20	.85
60	1.11
80	1.25

### Materials of Construction

Housing	Carbon steel
Flanges	Carbon steel
Basket/Liner	304 stainless steel
Cover and Basket Seals	Non-asbestos gasket

### Body Style

Standard		High Capacity	
Strainer Size	Body Diameter	Strainer Size	Body Diameter
2"	4"	4"	10" (150 ANSI Class Only)
3"	6"		
4"	6"		
6"	10"		
8"	12"		

### Maximum Working Pressure of Air Release Kits

Kit	Working Pressure <sup>2</sup> psi (kPa)	Seals	Materials of Construction
RB Type	285 psi at 100 °F (1,965 kPa at 38 °C)	Buna-N, FKM <sup>3</sup> , Low-Swell Buna	Housing: Carbon steel, float, stainless steel Internal Parts: Aluminum, Carbon steel, stainless steel
UB Type	740 psi at 100 °F (5,102 kPa at 38 °C)	Chemraz	Housing: Carbon steel, float, stainless steel Internal Parts: Carbon steel, stainless steel

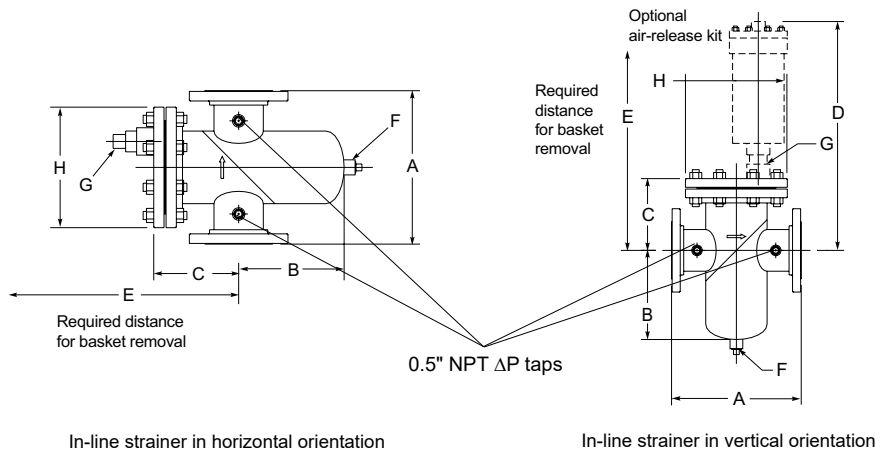
<sup>2</sup> Maximum working pressures are for temperatures of -20 °F to 100 °F (-28 °C to 38 °C).

<sup>3</sup> Fluoroelastomers (FKM).

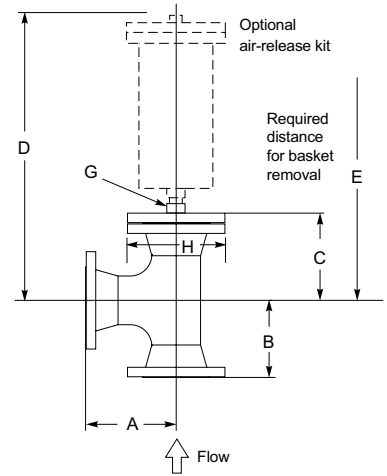
# Dimensions and Weights

Inches (millimeters)

## Straight-Through-Type Strainer



## Angle-Type Strainer



Model	Inlet-Outlet Flange Size and Class	Dimensions								Weight	
		A	B	C	D	E	Drain F (NPT)	Vent G (NPT)	H	lb	kg
<b>Straight-Through-Type Strainers</b>											
S2-1-ST	2" 150 RF	10.0 (254)	8.9 (226)	6.0 (152)	23.0 (584)	20.9 (531)	0.75	1.50	9.0 (229)	60	27.2
S2-3-ST	2" 300 RF	13.6 (345)	8.9 (226)	6.0 (152)	23.0 (584)	20.9 (531)	0.75	1.50	10.0 (254)	85	38.6
S3-1-ST	3" 150 RF	13.5 (343)	11.6 (295)	7.5 (190)	24.5 (622)	26.6 (676)	0.75	1.50	11.0 (279)	85	38.6
S3-3-ST	3" 300 RF	20.9 (531)	11.0 (279)	7.6 (194)	24.6 (625)	26.2 (665)	0.75	1.50	12.5 (318)	120	54.4
S4-1-ST	4" 150 RF	14.0 (356)	10.6 (269)	7.3 (184)	24.3 (617)	25.2 (640)	0.75	1.50	11.0 (279)	100	45.4
S4-3-ST	4" 300 RF	18.4 (467)	11.3 (287)	7.6 (194)	24.6 (625)	26.5 (673)	0.75	1.50	12.5 (318)	140	63.5
S4-1-HC	4" 150 RF	22.6 (574)	15.9 (406)	11.0 (279)	28.0 (711)	37.9 (963)	1.25	1.50	16.0 (406)	250	113.4
S6-1-ST	6" 150 RF	23.4 (594)	15.9 (406)	11.0 (279)	28.0 (711)	37.9 (963)	1.25	1.50	16.0 (406)	275	124.7
S6-3-ST	6" 300 RF	29.6 (752)	16.8 (427)	16.0 (406)	33.0 (838)	48.8 (1240)	1.25	1.50	17.5 (444)	470	213.2
S8-1-ST	8" 150 RF	27.1 (688)	23.3 (592)	14.0 (356)	31.0 (787)	51.3 (1303)	1.25	1.50	19.0 (483)	430	195.0
S8-3-ST	8" 300 RF	32.8 (833)	21.5 (546)	15.3 (389)	32.3 (821)	52.1 (1323)	1.25	1.50	20.5 (521)	700	317.5
<b>Angle-Type Strainers</b>											
A4-1-ST	4" 150 RF	7.1 (180)	7.1 (180)	8.1 (206)	24.1 (612)	18.4 (467)	N/A	1.50	9.0 (229)	79	36
A6-1-ST	6" 150 RF	9.1 (231)	9.1 (231)	10.1 (257)	26.1 (663)	23.7 (602)	N/A	1.50	11.0 (279)	140	64

Dimensions: Inches to the nearest tenth (millimeters to the nearest whole millimeters), each independently dimensioned from respective engineering drawings.  
 Weight: Add 47.0 lb (21.3 kg) if air-release kit is used.

# Modeling Code

Example: **S2** — **1** — **ST** — **N** — **40** — **00** — **0**

## Type/Flange Size

### Straight-Through Type      Angle Type

S2—2" S6—6"      A4—4"  
 S3—3" S8—8"      A6—6"  
 S4—4"

### ANSI Flange Class/Maximum Working Pressure at 100° F (38° C)

1—Class 150 RF/285 psi  
 3—Class 300 RF/740 psi  
 A—PN 10  
 B—PN 16

### Body Style

ST—Standard  
 HC—High capacity (4" only)

### Special Requirements

N—None  
 C—CRN  
 F—FIC 3  
 P—PWHT (Post Weld Heat Treat)  
 1—CRN + FIC 3  
 2—FIC3 and penetrant testing  
 3—FIC3, 100% X-ray, SPL hydro  
 4—Special Paint

## Differential Pressure Gauge/Switch

0—Pressure taps only (standard)  
 G—Differential pressure gauge  
 S—Differential pressure gauge and switch  
 N—Not available with angle type

## Vent/Air Release

00—Plugged NPT vent port (standard)  
 R1—RB head with Buna-N seals (300 psig)  
 R2—RB head with FKM<sup>3</sup> seals (300 psig)  
 U1—UB head with FKM<sup>3</sup> seals (720 psig)  
 U2—UB head with Chemraz seals (720 psig)  
 U3—UB head with FKM<sup>3</sup> seals (300 psig)  
 U4—UB head with Chemraz seals (300 psig)

## Basket

40—Basket with 40 mesh liner<sup>4</sup> (standard)  
 10—Basket with 10 mesh liner<sup>4</sup>  
 20—Basket with 20 mesh liner<sup>4</sup>  
 60—Basket with 60 mesh liner<sup>4</sup>  
 80—Basket with 80 mesh liner<sup>4</sup>  
 PP—304 stainless-steel perforated plate (no liner)  
 S—Special

*\*Permanent 304 stainless-steel liner*

<sup>3</sup> Fluoroelastomers (FKM)  
<sup>4</sup> Permanent 304 stainless-steel liner

### Revisions included in SS03039 Issue/Rev. 0.9 (4/21):

Page 4: Modeling updated under Differential Pressure Gauge/Switch: N—Not available with angle-type strainer.

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.