

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

#### Standard Features

- Removable basket for easy cleaning.
- Meets design requirements of ASME B31.3.
- NACE MR-01-75 compliance for products with hydrogen sulfide concentrations.
- 0.50" NPT differential pressure taps on the nozzles.
- 1.50" NPT Cover vent connection to mount Air Release Kit for static air elimination.
- ASME B16.5 Raised Face Flange standard.
- Teflon elastomer standard.
- Horizontal or vertical operation.
- Basket Seal.

#### Optional Features

- Air Release Kits.
- Basket Differential Pressure Gauge Kit with isolation valves to monitor basket cleanliness.
- ΔP Gauge Reed Type Switch Kit, adjustable from 0–30 psi (0–207 kPa) for remote indication.

**Note:** For other strainers/options, consult Specification Bulletin No. SS03038.

#### Operating Specifications

##### Maximum Strainer Working Pressure

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

##### Basket Burst Pressure

50 psi differential.

##### Temperature Range

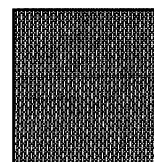
Seal Material	Range
Teflon	-20°F to 450°F (-29°C to 232°C)



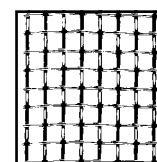
Model S4-1-ST Strainer

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

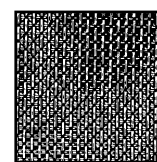
(Screens shown actual size.)



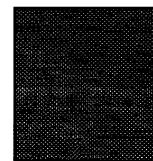
40 Mesh



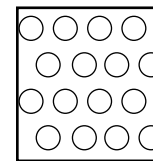
10 Mesh



20 Mesh



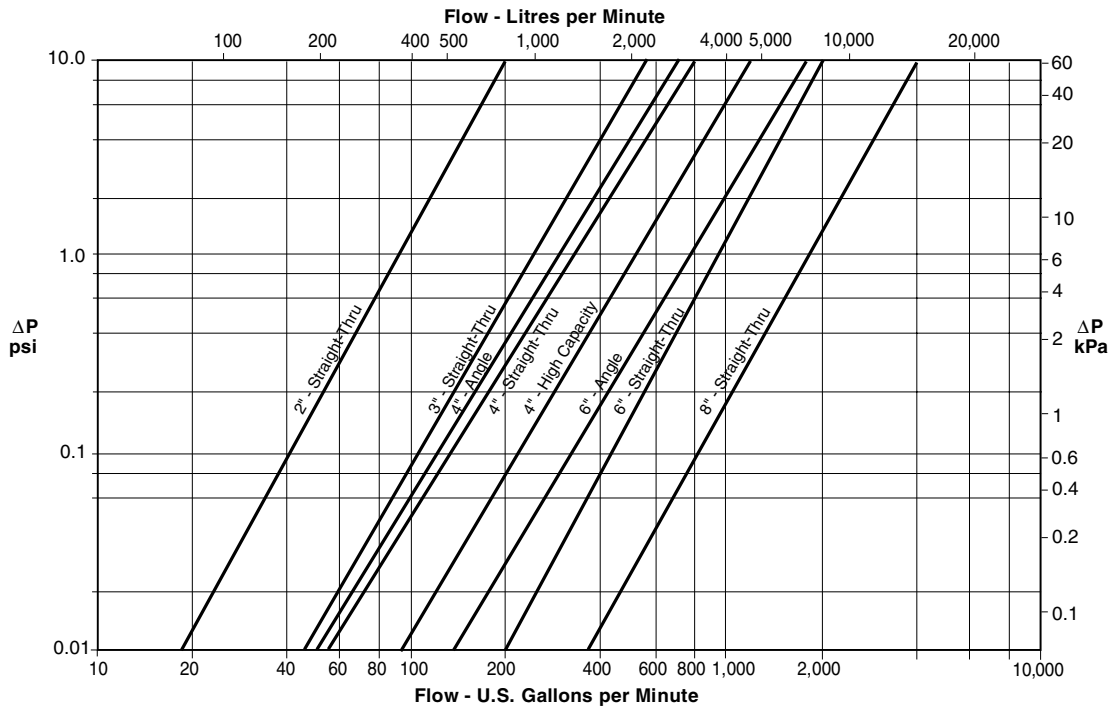
80 Mesh



Perforated Plate

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

## 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
80	1.25

## Materials of Construction

<b>Housing:</b>	Carbon Steel
<b>Flanges:</b>	Carbon Steel
<b>Basket/Liner:</b>	304 Stainless Steel
<b>Cover and Basket Seals:</b>	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"		

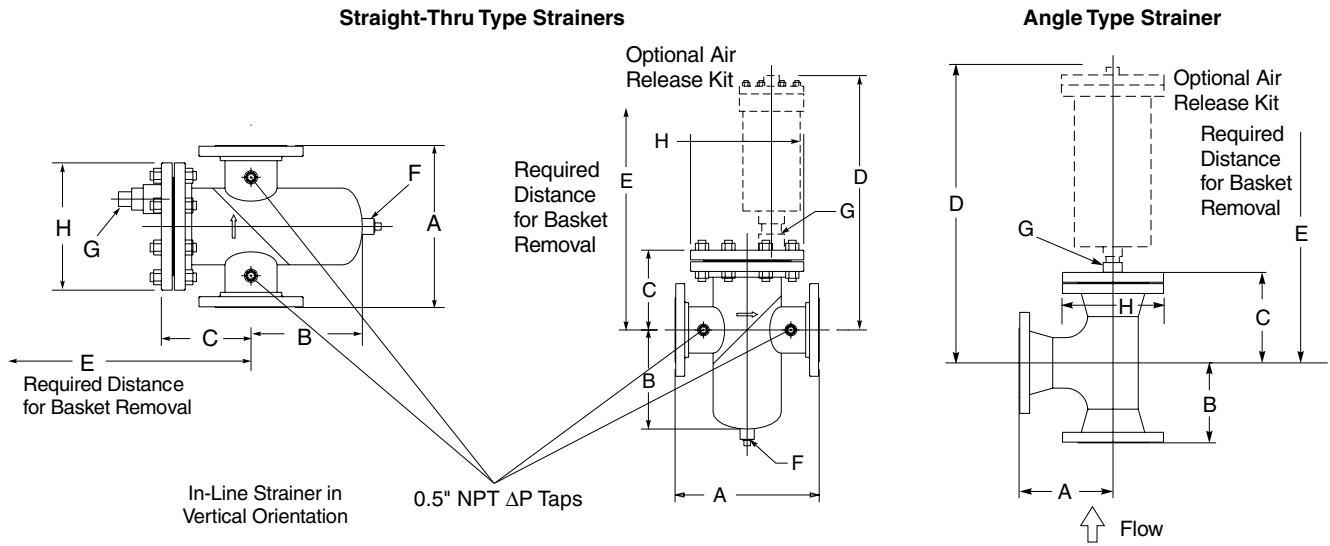
## Maximum Working Pressure of Air Release Kits

Kit	Working Pressure <sup>2</sup> psi (kPa)	Seals	Materials of Construction
RB-Type	285 psi @ 100°F (1,965 kPa @ 38°C)	Buna-N, Viton, LSB	Housing: Carbon Steel; Float: Stainless Steel; Internal Parts: Aluminum, Carbon Steel, Stainless Steel
UB-Type	740 psi @ 100°F (5,102 kPa @ 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).

# Dimensions and Weights

Inches (mm) and Pounds/kg



Model	Inlet-Outlet Flange Size & Class	Dimensions								Weight	
		A	B	C	D	E	Drain F (NPT)	Vent G (NPT)	H	Lb	Kg
<b>Straight-Thru 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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
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)	C/F	C/F
<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

**Note:** Dimensions – Inches to the nearest tenth (millimeters to the nearest whole mm), each independently dimensioned from respective engineering drawings.

## Modeling

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

### Type/Flange Size

#### Straight-Thru Type      Angle Type

**S2** - 2"   **S6** - 6"

**A4** - 4"

**S3** - 3"   **S8** - 8"

**A6** - 6"

**S4** - 4"

#### ANSI Flange Class/Max. Working Pressure @ 100° F (38° C)

**1** - Class 150 RF / 285 psi

**3** - Class 300 RF / 740 psi

### Body Style

**ST** - Standard

**HC** - High capacity  
(4" only)

### Differential Pressure Gauge/Switch

**0** - Pressure Taps Only (Standard)

**G** - Differential Pressure Gauge

**S** - Differential Pressure Gauge & Switch

### Vent / Air Release

**00** - Plugged NPT Vent Port (Standard)

**R1** - RB Head w/ Buna-N

**R2** - RB Head w/ Viton

**U1** - UB Head w/ Viton

**U2** - UB Head w/ Chemraz

### Basket

**40** - Basket with 40 Mesh Liner\*  
(Standard)

**10** - Basket with 10 Mesh Liner\*

**20** - Basket with 20 Mesh Liner\*

**80** - Basket with 80 Mesh Liner\*

**PP** - 304 SS Perforated Plate Basket-  
No Liner

\* Permanent 304 SS Liner

PD Meter Model	Recommended Strainer Model(s)	Turbine Meter Model	ANSI	Recommended Strainer Model(s)
C2-S1/S3	S2-1-ST	1.5-G/GL	150	S2-1-ST
C2-S5/S6	S2-3-ST	1.5-G/GL	300	S2-3-ST
E3-S1/S3	E30A <sup>3</sup>	2.0-G/GL	150	E30A <sup>3</sup>
E3-S5/S6	S3-3-ST	2.0-G/GL	300	S3-3-ST
E4-S1/S3	E40A <sup>3</sup>	3.0-G/GL	150	E40A <sup>3</sup>
F4-V1	E40A <sup>3</sup>	3.0-G/GL	300	S4-3-ST
F4-A1	E40A <sup>3</sup> or (A4-1-ST)	3.0-G/GL	150	S4-1-HC
F4-S1/S3	E40A <sup>3</sup> or (A4-1-ST)	4.0-G/GL	150	S6-1-ST
F4-S5/S6	S4-3-ST	4.0-G/GL	300	S6-3-ST
PRIME-4	S4-1-HC	4.0-G/GL	150	S6-1-ST
G6-V1	S6-1-ST			
G6-A1	(A6) S6-1-ST			
G6-S1/S3	(A6) S6-1-ST			
G6-S5/S6	S6-3-ST			
H8-S1/S3	S8-1-ST			
H8-S5/S6	S8-3-ST			

**Notes:**  
3 The respective "In-Line" strainer has been replaced by an "E" type strainer. See bulletin SS03041 for details.

Revisions included in SS03039 Issue/Rev. 0.5 (1/10):  
Page 2: Changed the UB-Type Seal from Teflon to Chemraz.  
Page 2: Changes made to Materials of Construction - Seals.

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.

Contact information is subject to change. For the most current contact information, visit our website at [www.fmctechnologies.com/measurementssolutions](http://www.fmctechnologies.com/measurementssolutions) and click on the "Contact Us" link in the left-hand column.

#### Headquarters:

500 North Sam Houston Parkway West, Suite 100, Houston, TX 77067 USA, Phone: +1 (281) 260 2190, Fax: +1 (281) 260 2191

#### Gas Measurement Products:

Erie, PA USA +1 (814) 898 5000

Ellerbek, Germany +49 (4101) 3040

Thetford, England +44 (1842) 822900

Kongsberg, Norway +47 (32) 28 67 00

Buenos Aires, Argentina +54 (11) 4312 4736

#### Integrated Measurement Systems:

Corpus Christi, TX USA +1 (361) 289 3400

Kongsberg, Norway +47 (32) 28 67 00

San Juan, Puerto Rico +1 (787) 772 8100

United Arab Emirates, Dubai +971 (4) 883 0303

#### Liquid Measurement Products:

Erie, PA USA +1 (814) 898 5000

Los Angeles, CA USA +1 (310) 328 1236

Ellerbek, Germany +49 (4101) 3040

Slough, England +44 (1753) 571515

Barcelona, Spain +34 (93) 201 0989

Moscow, Russia +7 (495) 5648705

Melbourne, Australia +61 (3) 9807 2818

Beijing, China +86 (10) 6500 2251

Singapore +65 6861 3011

Chennai, India +91 (44) 450 4400

Visit our website at [www.fmctechnologies.com/measurementssolutions](http://www.fmctechnologies.com/measurementssolutions)