

Strainer, 2, 3, and 4-inch, E Type

Bulletin SS03041 Issue/Rev. 0.6 (1/17)

SMITH METER® E TYPE STRAINERS

Smith Meter® E Type Steel Strainers are necessary to provide protection for metering systems against dirt and other foreign material. The large screen area and streamlined flow path (10° slant) minimize pressure drop. The sturdy basket can withstand a 50 psi differential without bursting and is easily removed for cleaning.

FEATURES

- Streamlined flow path for lower pressure drop
- Large screen area for less frequent cleaning
- Separable inner basket for easy cleaning
- Pressure taps (1/2 NPT) upstream and downstream nozzles
- Flow orientation can be installed horizontally or vertically

OPTIONS

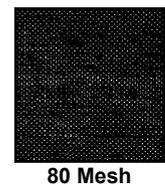
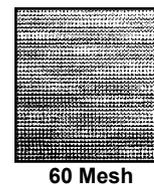
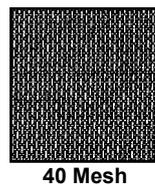
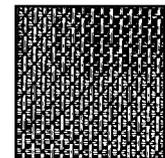
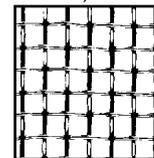
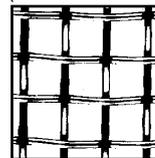
- Air release kit for static air elimination
- Basket differential pressure gauge kit with isolation valves to monitor basket cleanliness. Also available with switch kit for remote indication.
- NACE MR0175



Basket Screen

Mesh	Opening Size Inches (mm)	Percent Open Area Through Inner and Outer Baskets
4	0.203 (5.16)	47.2%
10	0.075 (1.91)	40.5%
20	0.036 (0.91)	37.3%
40 (Std.)	0.015 (0.38)	25.9%
60	0.009 (0.23)	22.0%
80	0.007 (0.18)	22.6%
100*	0.006 (0.14)	21.7%

(Screens shown actual size.)



*100 Mesh not shown.

OPERATING SPECIFICATIONS

Flange Class

ASME Class 150 Raised Face Flanges

Maximum Working Pressure psi (kPa)¹

285 (1,965)

Inner Basket

Stainless Steel in 4; 10; 20; 40; 60; 80 or 100 mesh

Outer Basket

Stainless Steel in 3/4 - 16 Expanded metal; 6 mesh

Size	Total Basket Area (Sq. Inches)
2"	64
3"	129
4"	129

Open Area Ratio

To calculate the ratio of open area of the basket to the cross sectional area of the corresponding pipe size, use the following equation:

$$\text{Ratio} = \frac{\text{Total Basket Area} \times \text{Percent Open Area}}{\text{Flow Area of Pipe}}$$

Example: E-40A with 40 mesh basket, 4" schedule 40 pipe.

$$\text{Ratio} = \frac{129 \times 25.9\%}{12.73 \text{ (Pipe Area)}} = 2.6:1$$

SEALS / TEMPERATURE RANGE

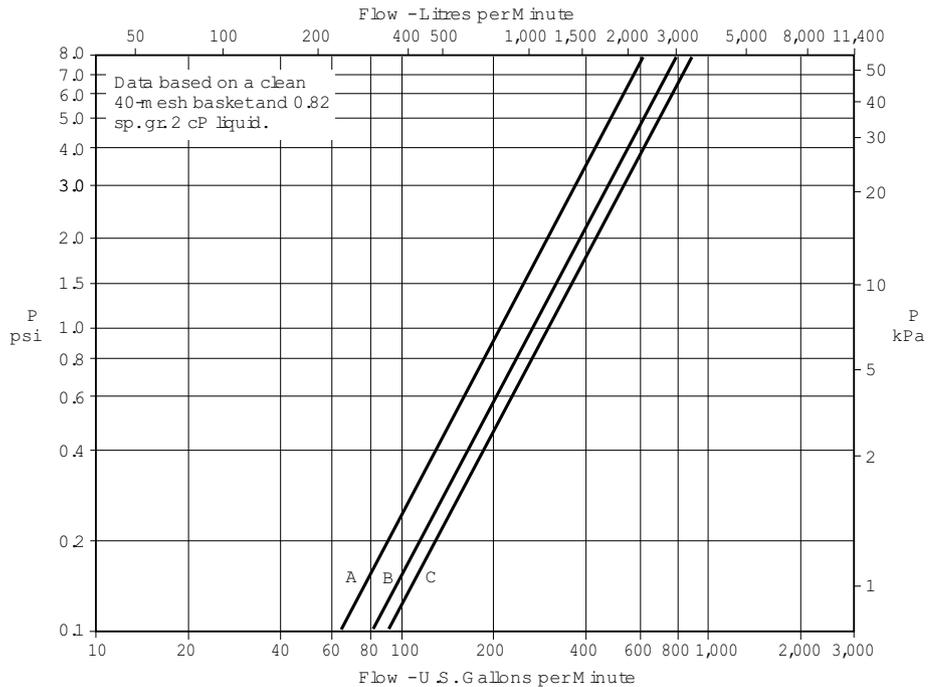
Standard:	
Buna Seals:	-20°F to 225°F (-29°C to 107°C)
Optional:	
Viton Seals:	0°F to 400°F (-18°C to 205°C)
PTFE ² Seals:	-20°F to 450°F (-29°C to 232°C)

PRESSURE DROP

- A - 2"
- B - 3"
- C - 4"

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

Mesh	Factor
04	.65
10	.75
20	.85
60	1.15
80	1.25
100	1.30



MATERIALS OF CONSTRUCTION

Housing:	Cast Carbon Steel
Flanges:	Cast Carbon Steel
Strainer Basket:	304 Stainless Steel
Outer Basket:	Stainless Steel
Internal Parts:	Carbon Steel
Seals:	Buna-N, Viton, or PTFE ²

AIR RELEASE KITS

Kit	Strainer Models	Seals	Materials of Construction
RB-Type	Up to 285 psi (1,965 kPa)	Buna-N or Viton	Housing: Carbon Steel; Float: Stainless Steel; Internal Parts: Aluminum, Stainless Steel

¹ Maximum working pressures are for temperatures of -20°F to +100°F. Consult factory for other temperatures.

² Polytetrafluoroethylene (PTFE).

MODEL CODE

Position 1: Type of Equipment

E - E-Type Strainers

Position 2: Size/Flange Type

20A - 2", ASME Class 150

30A - 3", ASME Class 150

40A - 4", ASME Class 150

Position 3: Basket

40 - Basket with 40 Mesh (Standard)

04 - Basket with 4 Mesh

10 - Basket with 10 Mesh

20 - Basket with 20 Mesh

60⁴ - Basket with 60 Mesh

80⁴ - Basket with 80 Mesh

100⁴ - Basket with 100 Mesh

14 - Triple Basket^{3, 6}

- 6 Mesh Outer Basket
- 40 Mesh Inner Basket
- 10 Mesh Removable Liner

Position 4: Elastomer Seals

B - Buna-N (Standard)

V - Viton

T - PTFE²

Position 5: Design Standards

0 - B31.3

C - CRN

Position 6: Differential Pressure Gauge / Switches

0 - Pressure Taps Only (Standard)

G - Differential Pressure Gauge

S - Differential Pressure Gauge with Switches

Position 7: Vent/Air Release

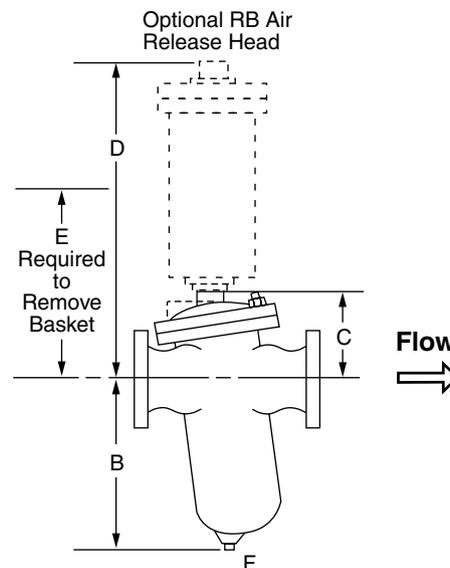
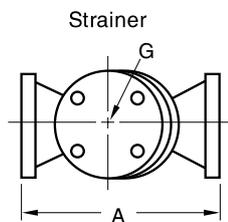
00 - NPT Vent Port (Standard)

R1 - RB Head with Buna Seals

R2 - RB Head with Viton Seals

DIMENSIONS⁵ AND WEIGHTS

Inches (millimeters)



Size	A	B	C	D	E	F	G	Weight (lb.) (Bare Strainer)
2"	9.8 (250)	8.9 (226)	5.7 (145)	20.7 (527)	14.2 (360)	3/4" NPT	1-1/2" NPT	35 (16 kg.)
3"	13.8 (350)	11.4 (290)	7.9 (200)	23 (583)	16.1 (410)	3/4" NPT	1-1/2" NPT	75 (34 kg.)
4"	13.8 (350)	11.4 (290)	7.9 (200)	23 (583)	16.1 (410)	3/4" NPT	1-1/2" NPT	85 (39 kg.)

² Polytetrafluoroethylene (PTFE).

³ The 6 in the triple basket is the mesh size of the outer basket in this design. The 10 mesh basket is designed to be removable for start ups. This basket design is meant to always be used with at least 1 inner basket.

⁴ Includes 20 mesh backing for support.

⁵ Dimensions – Millimeters to the nearest whole mm (inches to the nearest tenth), each independently dimensioned from respective engineering drawings.

⁶ Triple basket only available for size 3" and 4" only.

Revisions included in SS03041 Issue/Rev. 0.6 (1/17):

Editorial change 5/18: Corrected dimensions table on page 3. Inches and millimeters were switched.

2" size added to product line. U3 and U4 removed from position 7 in modeling code. Note 6 added - triple basket only available for 3" and 4". Operating Specifications - Outer basket information updated.

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.