

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.

Operating Specifications

Flange Class

150 Raised Face Flanges.

Maximum Working Pressure psi (kPa)¹

285 (1,965)

Liners

Stainless Steel in 4, 10, 20, 40, or 80 mesh.

Outer Basket and Internals

Zinc-Plated Carbon Steel and Cast Iron.

Seals/Temperature

Standard:

Buna Seals: -29°C to 93°C (-20°F to 200°F)

Optional:

Viton Seals: -18°C to 205°C (0°F to 400°F)

Teflon Seals: -29°C to 100°C (-20°F to 212°F)



Model E-40A

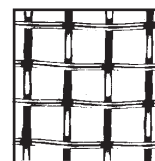
Temperature Range

Elastomer	Range ⁴
Buna-N (Std.)	-20°F to 225°F (-29°C to 107°C)
Viton	0°F to 400°F (-18°C to 205°C)
Teflon	-20°F to 450°F (-29°C to 232°C)

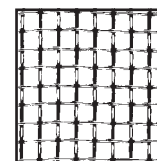
Basket Screen

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%
80	0.007 (0.18)	22.6%

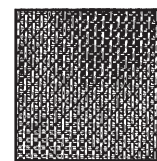
(Screens shown actual size.)



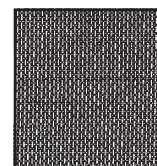
4 Mesh



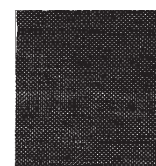
10 Mesh



20 Mesh



40 Mesh



80 Mesh

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

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

Open Area Ratio

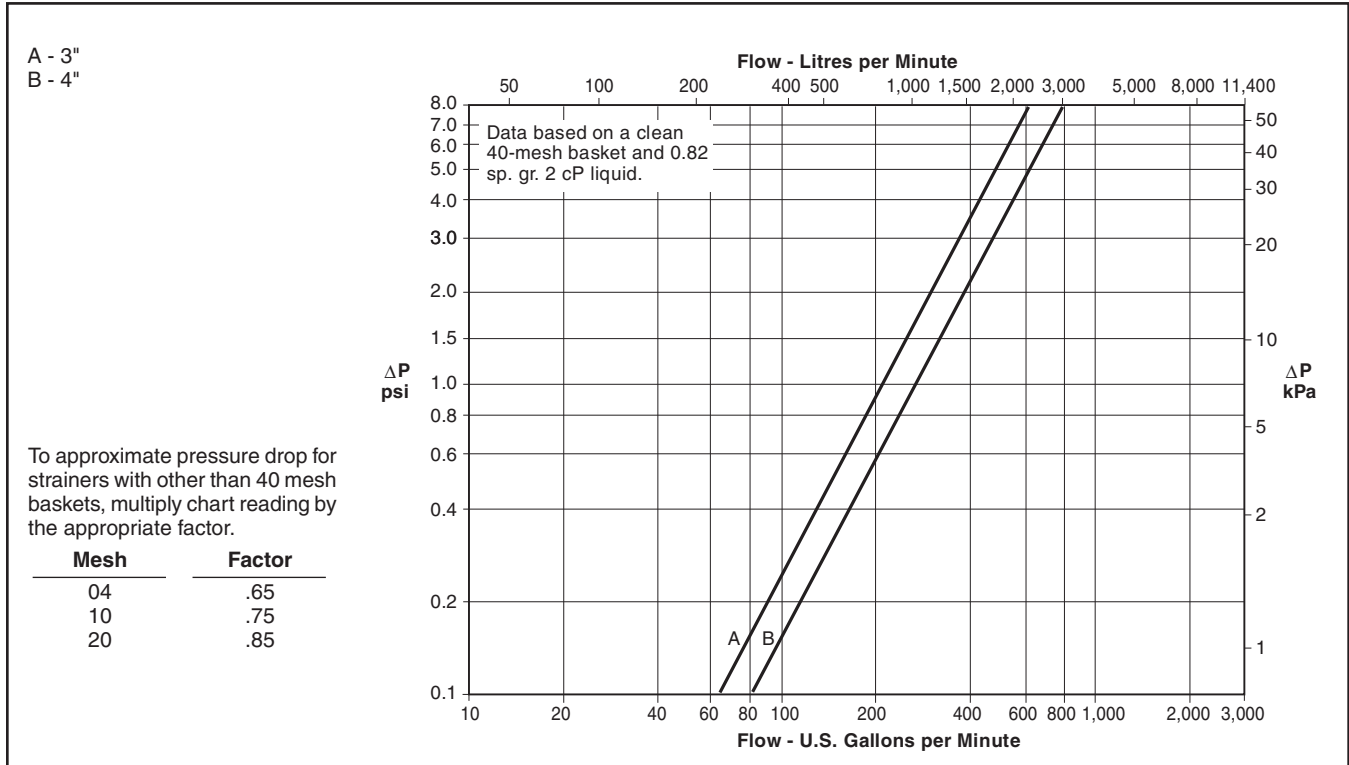
To calculate the ratio of open area of the basket to the cross sectional area of the corresponding pipe size, use the following equation:

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

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

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

Pressure Drop



Materials of Construction

Housing:	Cast Carbon Steel
Flanges:	Cast Carbon Steel
Strainer Basket:	304 Stainless Steel
Outer Basket and Internal Parts:	Zinc Plated Carbon Steel, Cast Iron
Seals:	Buna-N, Viton or Teflon

Air Release Kits

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

Model Code

Example: **E** - **30A** - **40** - **B** - **0** - **0** - **00**

Positions 1 : Type of Equipment

E - E-Type Strainers

Position 2: Size/Flange Type

30A - 3", 150 ANSI

40A - 4", 150 ANSI

Position 3: Basket

40 - Basket with 40 Mesh (Standard)

04 - Basket with 4 Mesh

10 - Basket with 10 Mesh

20 - Basket with 20 Mesh

80 - Basket with 80 Mesh

14 - 4/10/40 Triple Basket

Position 4: Elastomer Seals

B - Buna (Standard)

V - Viton

T - Teflon

Position 5: Design Standards

0 - B31.3

C - CRN

Position 6: Differential Pressure Gage/Switches

0 - Pressure Taps Only (Standard)

G - Differential Pressure Gage

S - Differential Pressure Gage with Switches

Position 7: Vent/Air Release

00 - NPT Vent Port (Standard)

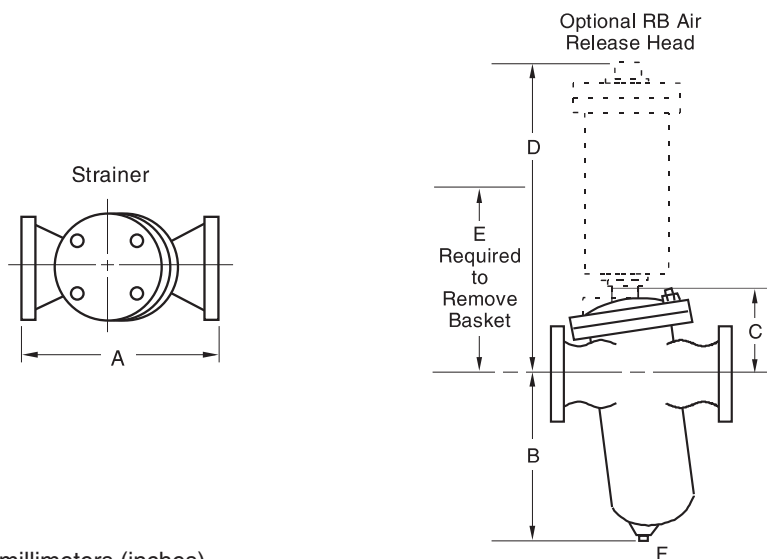
R1 - RB Head with Buna Seals

R2 - RB Head with Viton Seals

U1 - UB Head with Viton Seals

Dimensions² and Weights

Millimeters (Inches)



Strainer Dimensions — millimeters (inches)

Size	A	B	C	D	E	F	Weight (lbs.) (Bare Strainer)
3"	350 (13.8)	290 (11.4)	200 (7.9)	583 (23)	410 (16.1)	3/4" NPT	75 (34 kg.)
4"	350 (13.8)	290 (11.4)	200 (7.9)	583 (23)	410 (16.1)	3/4" NPT	85 (39 kg.)

² Dimensions — Millimetres to the nearest whole mm (inches to the nearest tenth), each independently dimensioned from respective engineering drawings.

Revisions included in SS03041 Issue/Rev. 0.3 (6/07):

- Page 1: Edited section - Seals/Temperature and Basket Screen
- Page 2: Edited section - Materials of Construction, added Stainless Steel liner
- Page 3: Added T-Teflon to Elastomer Seals, added to Pressure Drop
- Page 4: Added to Position 3: Basket

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.

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