Smith Meter® 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.
- **Drain** threaded NPT

Specifications

**Design / Fabrication**
According to PED 97/23/EC

**Flanges**
Raised Face suitable to fit with:
1. DIN EN PN16

**Air Vent**
1 ½” NPT plugged.

**Differential Pressure Taps**
1/2” NPT plugged.

**Inner Liner**
Choice of 10, 20, 40 (standard), or 80 mesh stainless steel.

**Seals / Temperature Limits**
Buna Seals: -29°C to 100°C
Viton Seals: -12°C to 100°C
PTFE¹ Seals: -29°C to 100°C

**Outer Basket and Internals**
Zinc-plated carbon steel and cast iron.

Options

- **Temperature** – Temperatures other than standard range, consult factory.
- **Special Painting** – Consult factory.
- **Automatic Air Release Kit** – For static air elimination:
  Optional with ATEX Approved Reed Switch
  Explosion-Proof EEx d II C T4.
  max. 230V AC/DC 1.0A
- **Basket Differential Pressure Gauge Kit** – With isolation valves to monitor basket cleanliness.
- **Basket Differential Pressure Gauge Kit and ATEX approved Switch** – With isolation valves to monitor basket cleanliness.

¹ PTFE (Polytetrafluoroethylene)
### Mesh Options

<table>
<thead>
<tr>
<th>Mesh</th>
<th>Opening Size (mm)</th>
<th>Percent Open Area through Inner and Outer Baskets</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1,91</td>
<td>40,5 %</td>
</tr>
<tr>
<td>20</td>
<td>0,91</td>
<td>37,3 %</td>
</tr>
<tr>
<td>40 (Std.)</td>
<td>0,38</td>
<td>25,9 %</td>
</tr>
<tr>
<td>80</td>
<td>0,18</td>
<td>22,6 %</td>
</tr>
</tbody>
</table>

### Open Area Ratio

<table>
<thead>
<tr>
<th>Size</th>
<th>Total Basket Area (cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;</td>
<td>413</td>
</tr>
<tr>
<td>2½&quot;</td>
<td>413</td>
</tr>
<tr>
<td>3&quot;</td>
<td>832</td>
</tr>
<tr>
<td>4&quot;</td>
<td>832</td>
</tr>
</tbody>
</table>

Screens shown actual size:

10 Mesh  
20 Mesh  
40 Mesh (standard)  
80 Mesh

### Pressure Drop

A - 2"  
B - 2½"  
C - 3"  
D - 4"

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

<table>
<thead>
<tr>
<th>Mesh</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>.75</td>
</tr>
<tr>
<td>20</td>
<td>.85</td>
</tr>
<tr>
<td>80</td>
<td>1.25</td>
</tr>
</tbody>
</table>

### Working Pressure

<table>
<thead>
<tr>
<th>Model</th>
<th>End Connections</th>
<th>Housing / Material</th>
<th>Maximum Working Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>psi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DIN</td>
</tr>
<tr>
<td>2&quot;</td>
<td>DIN EN PN 16 or ANSI 150 lbs.</td>
<td>Ductile Iron</td>
<td>232</td>
</tr>
<tr>
<td>2½&quot;</td>
<td>0,18</td>
<td>Cast Steel</td>
<td>285</td>
</tr>
</tbody>
</table>

Data based on a clean 40-mesh basket and 0.82 sp. gr. 2 cP liquid.
Model Code

Example: E – 20A – 04 – B – P – 0 – 00 – 1

Position 1: Type of Equipment
E - E-Type Strainer

Position 2: Size/Flange Type
20A - 2", 150 ANSI
25A - 2.5", 150 ANSI
30A - 3", 150 ANSI
40A - 4", 150 ANSI
20D - DN50, PN16
25D - DN65, PN16
30D - DN80, PN16
40D - DN100, PN16

Position 3: Basket
10 - 10 Mesh
20 - 20 Mesh
40 - 40 Mesh
80 - 80 Mesh

Position 4: Elastomer Seals
B - Buna-N
V - Viton
T - PTFE

Position 5: Design Standards
P - European PED-F (Liquid)
G - European PED-G (Gas)

Position 6: Differential Pressure Gauges/Switches
0 - Tabs only
G - Differential Gauges
S - Differential Gauges with ATEX switch

Position 7: Vent / Air Release Kits
00 - NPT Vent port
R1 - RB Head Buna
R2 - RB Head Viton
R3 - RB Head with switch Buna
R4 - RB Head with switch Viton
U1 - UB Head Buna
U2 - UB Head Viton

Position 8: Painting
1 - Special painting
2 - No painting

Dimensions and Weights

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Weight (bare strainer)</th>
<th>Volume (litres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;</td>
<td>250</td>
<td>226</td>
<td>145</td>
<td>527</td>
<td>360</td>
<td>½&quot; NPT</td>
<td>16 kg</td>
<td>3.0</td>
</tr>
<tr>
<td>2½&quot;</td>
<td>250</td>
<td>226</td>
<td>145</td>
<td>527</td>
<td>360</td>
<td>½&quot; NPT</td>
<td>18 kg</td>
<td>3.0</td>
</tr>
<tr>
<td>3&quot;</td>
<td>350</td>
<td>290</td>
<td>200</td>
<td>583</td>
<td>410</td>
<td>¾&quot; NPT</td>
<td>34 kg</td>
<td>9.2</td>
</tr>
<tr>
<td>4&quot;</td>
<td>350</td>
<td>290</td>
<td>200</td>
<td>583</td>
<td>410</td>
<td>¾&quot; NPT</td>
<td>39 kg</td>
<td>9.2</td>
</tr>
</tbody>
</table>
E-Type Strainer with Air Release Kit

- EExd Housing with Reed Switch (Optional)
- Air Release Kit with or without Switch (Optional)
- Blind Flange Cover
- Basket Holder
- Basket / Liner
- E-Type Strainer
- O-Ring Sealing
- Connection for Differential Pressure Gauge
- Differential Pressure Gauge 0-2.5 bar (Optional)
- Air Release Head
- EExe Junction Box with Terminals (Optional)
- Float of Air Release Head

**Graphic shows strainer with RB type air release kit with switch.**

### Air Release Kits*

<table>
<thead>
<tr>
<th>Kit</th>
<th>Strainer Models</th>
<th>Seals</th>
<th>Materials of Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>RB Type</td>
<td>Up to 1965 kPa</td>
<td>Buna-N, Viton</td>
<td>Housing: Carbon Steel; Float: Stainless Steel Internal Parts: Aluminum, Stainless Steel</td>
</tr>
<tr>
<td>UB Type</td>
<td>Up to 1965 kPa</td>
<td>Viton, Chemraz</td>
<td>Housing: Carbon Steel; Float: Stainless Steel Internal Parts: Carbon Steel, Stainless Steel</td>
</tr>
</tbody>
</table>

* Reference Bulletin SS03040 for RB and UB Air Release Heads

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March 2019 - updated branding and contact information.

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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