SERIES DESCRIPTION

Viking Lid-Ease® Simplex Strainers provide protection for your pumping system with low pressure drop. The inclined position of the strainer basket adjacent to the porting provides smooth flow patterns not found in conventional basket-type strainers.

Viking’s Lid-Ease Simplex Strainers reduce cleaning problems encountered with conventional strainers. Simple lid rotation disengages the breech lock type lid permitting easy removal of the basket. Basket is removed from the top of the strainer, possibly eliminating the need to completely drain the system or allowing foreign matter to drop back into the line when the strainer is cleaned. The relatively small port-to-port dimensions of the strainer allow easy installation.

Viking Lid-Ease Simplex Strainers are designed with a weatherseal lid to protect the breech lock area from exterior elements and prevent air infiltration into the pump suction. Strainers are also equipped with a drain plug for complete draining of strainer if needed.

Tapped or flanged end ports available.

FEATURES & BENEFITS

• Quarter-turn, easy opening breech-lock lid simplifies routine cleaning with no special tools required
• Inclined basket design provides low pressure drop for high system efficiency and allows for smooth flow patterns
• Simple Cleaning: When basket requires cleaning simply vent system pressure, remove lid and withdraw basket from top (foreign matter contained in basket will not drop back into system)
• Top basket removal eliminates the need to drain the strainer and minimizes product loss
• Small in overall dimension and light in weight
• Viking quality construction in cast iron or stainless steel
• Optional magnetic inserts are available for trapping ferrous particles
• Optional differential pressure indicators optimize cleaning intervals
**MODEL NUMBER KEY**

**F - 1020 - IIRN - 013**

**Product:**
- F = Strainer
- I = Internal Tapped Threads (NPT)
- F = Flanged

**Material:**
- IRN = Cast Iron
- SST = Stainless Steel

**Basket Mesh:**
- 0 = No Mesh
- 1 = 10 Mesh
- 2 = 20 Mesh
- 3 = 40 Mesh
- 4 = 60 Mesh
- 5 = 80 Mesh
- 6 = 100 Mesh

**Elastomer Seal:**
- 01 = Buna-N — Cast Iron
- 02 = Fluoroelastomer (FKM) — Stainless Steel

Kits available in Buna, FKM & PTFE when alternate material needed (See page 640.7 for kit options and part numbers)

**Example:**

**F-1020-IIRN-013**

A cast iron simplex strainer with 2” NPT ports, Buna-N O-Ring seal, 40 mesh basket.

---

**MAGNETIC INSERTS (OPTIONAL)**

Magnetic inserts are available for trapping ferrous particles too small for the basket straining media. The inserts are secured to basket handle using a spring clip which makes removal for cleaning a simple task.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Strainer Port Size</th>
<th>Number of Inserts</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-490-032-999-00</td>
<td>¾” &amp; 1”</td>
<td>1</td>
</tr>
<tr>
<td>3-490-030-999-00</td>
<td>1½” &amp; 2”</td>
<td>1</td>
</tr>
<tr>
<td>3-490-029-999-00</td>
<td>3”</td>
<td>2</td>
</tr>
<tr>
<td>3-490-031-999-00</td>
<td>4”</td>
<td>2</td>
</tr>
<tr>
<td>3-490-031-999-00</td>
<td>6”</td>
<td>3</td>
</tr>
</tbody>
</table>

**PRESSURE DIFFERENTIAL INDICATORS - PDI (OPTIONAL)**

Pressure differential indicators are available as an option to indicate when basket needs to be cleaned. Consult Factory.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Material</th>
<th>Pressure Range</th>
<th>Strainer Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-318-012-999-00</td>
<td>Aluminum</td>
<td>0-5 PSI</td>
<td>Suction</td>
</tr>
<tr>
<td>2-318-007-999-00</td>
<td>Stainless Steel</td>
<td>0-5 PSI</td>
<td>Suction</td>
</tr>
<tr>
<td>2-318-013-999-00</td>
<td>Aluminum</td>
<td>0-50 PSI</td>
<td>Discharge</td>
</tr>
<tr>
<td>2-318-008-999-00</td>
<td>Stainless Steel</td>
<td>0-50 PSI</td>
<td>Discharge</td>
</tr>
</tbody>
</table>
FEATURES

Strainer bodies are available in cast iron or stainless steel materials. For normal use, baskets of double wall construction are recommended. The inner stainless steel screen (10, 20, 40, 60, 80 or 100 mesh) is rigidly supported by a perforated stainless steel basket having maximum hoop strength so that a high differential pressure over the basket will not burst or distort the basket to the extent that it cannot be withdrawn from the body.

Stainless steel construction can also be used for steel requirements in the chemical, petrochemical and pharmaceutical industries.

AVAILABLE MESH SIZES

<table>
<thead>
<tr>
<th>Mesh</th>
<th>10</th>
<th>20</th>
<th>40</th>
<th>60</th>
<th>80</th>
<th>100</th>
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</thead>
<tbody>
<tr>
<td>Opening (Inches)</td>
<td>.075</td>
<td>.034</td>
<td>.015</td>
<td>.0092</td>
<td>.007</td>
<td>.0055</td>
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<tr>
<td>Opening (Microns)</td>
<td>1910</td>
<td>860</td>
<td>380</td>
<td>230</td>
<td>190</td>
<td>140</td>
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</tbody>
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SPECIFICATIONS – STRAINERS

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Port Size</th>
<th>Nominal Pipe Area</th>
<th>Basket Surface Area</th>
<th>Basket Free Area</th>
<th>Ratio Free Area / Port Area</th>
<th>Maximum Basket Differential Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1007</td>
<td>¾&quot;</td>
<td>.53</td>
<td>.156</td>
<td>8.6</td>
<td>5.4</td>
<td>10.2</td>
</tr>
<tr>
<td>F-1010</td>
<td>1&quot;</td>
<td>.86</td>
<td>.156</td>
<td>8.6</td>
<td>5.4</td>
<td>6.3</td>
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<tr>
<td>F-1015</td>
<td>1½&quot;</td>
<td>2.04</td>
<td>.156</td>
<td>17.9</td>
<td>11.3</td>
<td>5.5</td>
</tr>
<tr>
<td>F-1020</td>
<td>2&quot;</td>
<td>3.36</td>
<td>.188</td>
<td>33</td>
<td>16.8</td>
<td>5.0</td>
</tr>
<tr>
<td>F-1030</td>
<td>3&quot;</td>
<td>7.39</td>
<td>.188</td>
<td>66</td>
<td>33.7</td>
<td>4.6</td>
</tr>
<tr>
<td>F-1040</td>
<td>4&quot;</td>
<td>12.73</td>
<td>.188</td>
<td>113</td>
<td>57.6</td>
<td>4.5</td>
</tr>
<tr>
<td>F-1060</td>
<td>6&quot;</td>
<td>28.9</td>
<td>.188</td>
<td>233</td>
<td>118.8</td>
<td>4.1</td>
</tr>
<tr>
<td>F-1080</td>
<td>8&quot;</td>
<td>50.0</td>
<td>.188</td>
<td>636</td>
<td>324.7</td>
<td>6.5</td>
</tr>
</tbody>
</table>

© For other basket perforations, consult the factory.
PARTS & ACCESSORIES: BASKET-TYPE LINE STRAINERS
VIKING LID-EASE® SIMPLEX STRAINERS

CONSTRUCTION – CAST IRON

<table>
<thead>
<tr>
<th>Model Numbers</th>
<th>Port Size</th>
<th>Body &amp; Lid</th>
<th>O-Ring for Lid</th>
<th>Basket Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inches</td>
<td>GPM</td>
<td>PSI</td>
<td>Degrees F.</td>
</tr>
<tr>
<td>F-1007-IIRN</td>
<td>¾&quot;</td>
<td>20</td>
<td>200</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1010-IIRN</td>
<td>1&quot;</td>
<td>30</td>
<td>200</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1015-IIRN</td>
<td>1½&quot;</td>
<td>50</td>
<td>200</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1020-FIRN</td>
<td>2&quot;</td>
<td>100</td>
<td>200</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1020-IIRN</td>
<td>2&quot;</td>
<td>100</td>
<td>200</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1030-FIRN</td>
<td>3&quot;</td>
<td>200</td>
<td>125</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1030-IIRN</td>
<td>3&quot;</td>
<td>200</td>
<td>125</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1040-FIRN</td>
<td>4&quot;</td>
<td>400</td>
<td>125</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1060-FIRN</td>
<td>6&quot;</td>
<td>800</td>
<td>125</td>
<td>-40 to 400</td>
</tr>
<tr>
<td>F-1080-FIRN</td>
<td>8&quot;</td>
<td>1500</td>
<td>125</td>
<td>-40 to 400</td>
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</tbody>
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- Buna-N O-Ring standard, Fluoroelastomer (FKM) and PTFE (Derivative) Encapsulated optional. For other materials consult factory.

CONSTRUCTION – STAINLESS STEEL

<table>
<thead>
<tr>
<th>Model Numbers</th>
<th>Port Size</th>
<th>Body &amp; Lid</th>
<th>O-Ring for Lid</th>
<th>Basket Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inches</td>
<td>GPM</td>
<td>PSI</td>
<td>Degrees F.</td>
</tr>
<tr>
<td>F-1007-ISST</td>
<td>¾&quot;</td>
<td>20</td>
<td>200</td>
<td>-100 to 400</td>
</tr>
<tr>
<td>F-1010-ISST</td>
<td>1&quot;</td>
<td>30</td>
<td>200</td>
<td>-100 to 400</td>
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<td>F-1015-ISST</td>
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<td>200</td>
<td>-100 to 400</td>
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<tr>
<td>F-1020-FSST</td>
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<td>100</td>
<td>200</td>
<td>-100 to 400</td>
</tr>
<tr>
<td>F-1020-ISST</td>
<td>2&quot;</td>
<td>100</td>
<td>200</td>
<td>-100 to 400</td>
</tr>
<tr>
<td>F-1030-FSST</td>
<td>3&quot;</td>
<td>200</td>
<td>125</td>
<td>-100 to 400</td>
</tr>
<tr>
<td>F-1040-FSST</td>
<td>4&quot;</td>
<td>400</td>
<td>125</td>
<td>-100 to 400</td>
</tr>
<tr>
<td>F-1060-FSST</td>
<td>6&quot;</td>
<td>800</td>
<td>125</td>
<td>-100 to 400</td>
</tr>
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</table>

- FKM O-Ring standard, Buna-N and PTFE (Derivative) Encapsulated optional. For other materials consult factory.
DIMENSIONS – STRAINERS WITH TAPPED PORTS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1007-I</td>
<td>¾</td>
<td>in</td>
<td>4.40</td>
<td>5.36</td>
<td>2.46</td>
<td>7.00</td>
<td>3.25</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>112</td>
<td>136</td>
<td>63</td>
<td>178</td>
<td>83</td>
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<tr>
<td>F-1010-I</td>
<td>1</td>
<td>in</td>
<td>4.40</td>
<td>5.36</td>
<td>2.46</td>
<td>7.00</td>
<td>3.25</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>112</td>
<td>136</td>
<td>63</td>
<td>178</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>F-1015-I</td>
<td>1½</td>
<td>in</td>
<td>5.00</td>
<td>6.36</td>
<td>2.74</td>
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<td>4.00</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>127</td>
<td>162</td>
<td>70</td>
<td>203</td>
<td>102</td>
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<tr>
<td>F-1020-I</td>
<td>2</td>
<td>in</td>
<td>6.38</td>
<td>7.12</td>
<td>3.32</td>
<td>7.50</td>
<td>4.60</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>162</td>
<td>181</td>
<td>84</td>
<td>191</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>F-1030-I</td>
<td>3</td>
<td>in</td>
<td>10.00</td>
<td>9.31</td>
<td>4.18</td>
<td>9.50</td>
<td>7.06</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>254</td>
<td>236</td>
<td>106</td>
<td>241</td>
<td>179</td>
<td></td>
</tr>
</tbody>
</table>

① IRN—Iron, SST—Stainless Steel. (See specifications tables for available materials of construction).
② Tapped ports compatible with standard pipe. (NPT Threads)

DIMENSIONS – STRAINERS WITH FLANGED PORTS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1020-F</td>
<td>2</td>
<td>in</td>
<td>7.30</td>
<td>7.12</td>
<td>3.32</td>
<td>7.50</td>
<td>4.60</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>185</td>
<td>181</td>
<td>84</td>
<td>191</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>F-1030-F</td>
<td>3</td>
<td>in</td>
<td>10.00</td>
<td>9.31</td>
<td>4.18</td>
<td>9.50</td>
<td>7.06</td>
</tr>
<tr>
<td></td>
<td>mm</td>
<td>254</td>
<td>236</td>
<td>106</td>
<td>241</td>
<td>179</td>
<td></td>
</tr>
<tr>
<td>F-1040-F</td>
<td>4</td>
<td>in</td>
<td>12.25</td>
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<tr>
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<td>F-1060-F</td>
<td>6</td>
<td>in</td>
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<td>15.12</td>
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<td>16.50</td>
<td>11.44</td>
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<td>mm</td>
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<td>155</td>
<td>419</td>
<td>291</td>
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<tr>
<td>F-1080-F</td>
<td>8</td>
<td>in</td>
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<td>22.38</td>
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<td></td>
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<td>568</td>
<td>191</td>
<td>622</td>
<td>432</td>
<td></td>
</tr>
</tbody>
</table>

① IRN—Iron, SST—Stainless Steel (See specifications tables for available materials of construction).
② Flanged ports suitable for use with 125# ANSI cast Iron or 150# ANSI steel or stainless steel companion flanges or flanged fittings.

These dimensions are average and not for construction purposes. Certified prints on request.
PRESSURE DROP INFORMATION

Example: To determine the pressure drop across a strainer for a pump with 3" ports producing a flow rate of 150 GPM, with a viscosity of 700 SSU; first, determine the nominal pressure differential for the 3" strainer (F-1030) by following 150 GPM vertically until it intersects the F-1030 curve then read horizontally on the Pressure Drop Curve the nominal pressure differential (.7 psi). Using the Correction Curves, enter vertically at 700 SSU and proceed until intersecting the 60 mesh curve, then read the correction factor horizontally (3.0). Therefore, the actual pressure drop will be 3.0 x .7 = 2.1 psi (4.28" of Hg.)

Pressure Drop Curves

![Pressure Drop Curve Diagram]

Correction Curves

![Correction Curve Diagram]
## O-RING KIT OFFERINGS

<table>
<thead>
<tr>
<th>Kit Part Number</th>
<th>Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-464-ORG-860-K100</td>
<td>3/4&quot; &amp; 1&quot;</td>
<td>Buna O-Rings</td>
</tr>
<tr>
<td>3-464-ORG-860-K101</td>
<td>1.5&quot;</td>
<td>Buna O-Rings</td>
</tr>
<tr>
<td>3-464-ORG-860-K102</td>
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<tr>
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<td>Buna O-Rings</td>
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<tr>
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