SANITARY LIQUID TRAP MAGNETS

APPLICATION:
Engineered to remove ferrous contaminants from liquid and slurry lines. Efficiently remove tramp iron before maintenance and product contamination problems occur. The benefits of this magnetic separator can be experienced in most cases with no appreciable pressure drop or reduction in flow rates. All units incorporate a sump type housing to trap non-ferrous particles. Liquid Traps may be installed horizontally, vertically, or on an angle without affecting their magnetic efficiency.

Metal trash and fines, including work-hardened stainless steel as small as 0.0001 inches are captured by powerful, rare-earth, neodymium magnets and held in-place until cleaned. Powered by proprietary, easy to clean, tube or plate circuits that operate to pressures of 750 PSI and temperatures of 500° F.

For more industrial applications please refer to our Industrial Liquid Trap Magnet Data Sheet.

CONSTRUCTION:
• Highest grade of magnet material with choices including Neodymium-Iron-Boron (rare-earth), Samarium-Cobalt (rare-earth), Ceramic, and Alnico.
• 100% Stainless Steel Construction
• Liquid tight with food grade O-rings
• Easy access for inspection and maintenance
• Tri-clamp, Bevel-seat (Acme thread), or weld end inlet and outlets
• Sanitary construction

OPTIONS:
• Special alloy construction
• Special inlet/outlet connectors
• Operating pressures up to 750 PSI

INDUSTRIAL LIQUID TRAP MAGNETS

CONSTRUCTION:
• Highest grade of magnet material with choices including Neodymium-Iron-Boron (rare-earth), Samarium-Cobalt (rare-earth), Ceramic, and Alnico.
• 100% Stainless Steel Construction
• Liquid tight with food grade O-rings
• Easy access for inspection and maintenance
• Tri-clamp, Bevel-seat (Acme thread), or weld end inlet and outlets
• Sanitary construction

OPTIONS:
• Special alloy construction
• Special inlet/outlet connectors
• Operating pressures up to 750 PSI

L-Ring
Magnetic Base
Magnetic Base
L-Ring
Clamp
Flow
Body
Clamp
Flow
L-Ring

SANITARY LIQUID TRAP MAGNETS

OPTION: Plate Style Liquid Trap Magnets See page 3

L-Ring
Magnetic Base
Magnetic Base
L-Ring
Clamp
Flow
Body
Clamp
Flow
L-Ring

For technical assistance or to order
1-800-SUREMAG™
1-800-787-3624
900 S. Glaspie Street
Oxford, MI 48371
Tel: 248-628-3808
Fax: 248-628-3844
www.puritanmagnetics.com
E-Mail: magnet@puritanmagnetics.com
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Data Sheet #2158 / Rev. 10/14

Note: Due to ongoing product development, certain specifications are subject to change without notice.
SELECTING THE PROPER LIQUID TRAP:
Use Chart 1 to classify your product's viscosity. Choose the correct size Liquid Trap from Chart 2 by matching application's product viscosity.

OPERATION:
As liquids or slurries are pumped through the Liquid Trap, ferrous contaminants adhere to the strategically placed magnetic tubes. The design and construction allow the tramp iron to work around the downstream side of the tubes where it is safely out of the product flow and washoff is prevented. Cleaning is achieved by removing the quick release clamp and removing the magnet assembly from the housing. The housing is designed not only to house the magnetic tubes, but also to act as a sump. Unwanted non-magnetic particles tend to gravitate to the bottom of the enclosure. Additionally, the sump bottom is attached by a quick release clamp to ease cleaning of the entire unit.

STANDARD SANITARY LIQUID TRAP MAGNETS

APPLICATION:
These magnetic separators are typically used when processing fragile solids such as fruit preserves, cooked meats, cottage cheese, or sinewy products where they are placed in front of pumps, screens, or mills to protect equipment from damage, or in front of fillers to ensure product quality.

Specific Model and Sizing
Refer to Tables A, B, and C. Use Table “A” to select your application's product viscosity. Use Table B to match your application’s product viscosity with pumping capacity to select model or line size. When operating at or close to a Liquid Trap’s upper flow capacity we recommend moving up to the next size.

Table A. Product Viscosity

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<thead>
<tr>
<th>Class 1</th>
<th>Class 2</th>
<th>Class 3</th>
<th>Class 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluids and Strained Products</td>
<td>Pulp Products</td>
<td>Viscous Products</td>
<td>Very Viscous Products</td>
</tr>
<tr>
<td>Thin salad dressings, thin soups, warm jellies, clear broths, beverages, juices, light sauces</td>
<td>applesauce, pulped fruits and vegetables, custards, syrups, cranberries, hot preserves, baby foods</td>
<td>pumpkin filling, chopped foods, creamed cheese, frozen slush, heavy sauces, baby foods</td>
<td>nut butters, slowflowing products, cooked products, minced meat, thick batters, pet foods</td>
</tr>
</tbody>
</table>

Table B. Maximum Pressures in Pounds per Square Inch (Bar)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>LINE SIZE</th>
<th>MAXIMUM PRESSURE</th>
<th>CLASS 1</th>
<th>CLASS 2</th>
<th>CLASS 3</th>
<th>CLASS 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSLP</td>
<td>1.5” - 2”</td>
<td>200 (13.8)</td>
<td>41 (2.9)</td>
<td>31 (2.2)</td>
<td>23 (1.6)</td>
<td>12 (0.8)</td>
</tr>
<tr>
<td>NLT</td>
<td>200 (13.8)</td>
<td>46 (3.2)</td>
<td>67 (4.6)</td>
<td>38 (2.7)</td>
<td>19 (1.3)</td>
<td></td>
</tr>
<tr>
<td>NTL</td>
<td>2.5” - 3”</td>
<td>180 (12.4)</td>
<td>187 (12.8)</td>
<td>131 (9.3)</td>
<td>75 (5.2)</td>
<td></td>
</tr>
<tr>
<td>NLT</td>
<td>4”</td>
<td>180 (12.4)</td>
<td>252 (17.4)</td>
<td>178 (12.5)</td>
<td>101 (7.2)</td>
<td></td>
</tr>
<tr>
<td>NTL</td>
<td>1.5” - 2.5”</td>
<td>750 (51.7)</td>
<td>75 (5.2)</td>
<td>35 (2.4)</td>
<td>22 (1.5)</td>
<td></td>
</tr>
<tr>
<td>NLTHF</td>
<td>75 - 1”</td>
<td>150 (10.3)</td>
<td>45 (3.1)</td>
<td>32 (2.2)</td>
<td>18 (1.2)</td>
<td></td>
</tr>
</tbody>
</table>

Table C. Food Grade L-Ring Gaskets

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>EPDM (Std.)</th>
<th>BUNA-N</th>
<th>VITON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range</td>
<td>-50 to 400°F</td>
<td>-20 to 225°F</td>
<td>-15 to 400°F</td>
</tr>
<tr>
<td>Acid resistance</td>
<td>good</td>
<td>good</td>
<td>excellent</td>
</tr>
<tr>
<td>Alkali resistance</td>
<td>good</td>
<td>good</td>
<td>good</td>
</tr>
<tr>
<td>Veg. Oil resistance</td>
<td>poor</td>
<td>excellent</td>
<td>excellent</td>
</tr>
<tr>
<td>Steam, to 350°F</td>
<td>good</td>
<td>poor</td>
<td>poor</td>
</tr>
</tbody>
</table>
STANDARD SANITARY LIQUID TRAP MAGNETS

OPERATION:
As liquids or slurries are pumped through the Liquid Trap, ferrous contaminants adhere to the strategically placed magnetic tubes. The design and construction allow the trap to work around the downstream side of the tubes where it is safely out of the product flow and washoff is prevented. Cleaning is achieved by removing the quick release clamp and removing the magnet assembly from the housing. The housing is designed not only to house the magnetic tubes, but also to act as a sump. Unwanted non-magnetic particles of the tubes where it is safely out of the product flow and washoff is prevented. Cleaning is achieved by removing the quick release clamp to ease cleaning of the entire unit.

SELECTING THE PROPER LIQUID TRAP:
Use Chart 1 to classify your products viscosity. Choose the correct size Liquid Trap from Chart 2 by matching the Liquid Trap’s listed capacity with your system’s maximum pumping capacity using your product’s group number. Line reducers (expanders) may be used if you choose.

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**APPLICATION:**
These magnetic separators are typically used when processing fragile solids such as fruit preserves, cooked meats, cottage cheese, or sinewy products where they are placed in front of pumps, screens, or mills to protect equipment from damage, or in front of fillers to ensure product quality.

Specific Model and Sizing
Refer to Tables A, B, and C. Use Table “A” to select your application’s product viscosity. Use Table B to match your application’s product viscosity with pumping capacity to select model or line size. When operating at or close to a Liquid Trap’s upper flow capacity we recommend moving up to the next size.

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**PLATE SYLE LIQUID TRAP MAGNETS**

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