# Conley Product Bulletin

## Conley Basket Strainers

### Extra Heavy Duty

**RUGGED TOP OF THE LINE PERFORMANCE ~ AFFORDABLE COST**

### Conley Strainer Types

- Inline basket strainers in sizes from 1 ½” through 30”
- Inline Y-type basket strainers in sizes from 1 ½” through 4”

### Description

- Conley basket strainers were introduced in 1994
- Extra heavy wall filament wound for service up to 150 psi
- 60 mil double Nexus® reinforced corrosion barrier (inner liner)
- **Premium epoxy resin liner**
- **Premium vinyl ester resin liner**
- **Premium novolac vinyl ester resin liner**
- **Premium furan resin liner**
- Optional 100 mil liner available
- Premium aromatic amine cured epoxy cages for operating temperatures up to 275°F
- Color coding available
- Fire-resistant strainers available
- Conductive strainers available
- Abrasion-resistant liners available

### Typical Applications

- Waste water treatment
- Steel pickling
- Solvents
- Petrochemical
- Pharmaceutical
- Chemical processing
- Jet fuel
- Gasoline – Diesel – Fuel Oil
- Cooling water
- Industrial waste
- Food and beverages
- Brine (salts) and brackish water

### Performance

- Excellent chemical resistance inside and outside to a variety of caustics, acids, brines, and petroleum products ~ See the chemical resistance chart for fluid services
- Hydrostatic pressure testing at 225 psi

### Specifications

- FRP standard basket
- Optional 316 stainless steel or polypropylene baskets available
- Basket perforations in 316 SS available from 325 mesh to ½” diameter
- Basket perforations in polypro available with 1/32”, 1/16”, 1/6” and 3/16” diameters
- O-ring standard is Viton with optional Hypalon, EPDM, and Buna-N
- Flanges conform to ANSI B16.5 bolt hole pattern
- Standard drain plug
- Optional pressure gage ports

### Listings

- U.S. Federal Regulation FDA 21 CFR 175.300
- U.S. Federal Regulation FDA 21 CFR 177.2420
Conley Basket Strainers

Conley Basket Strainers offer three distinct advantages.

1) All glass fiber construction – no metal working parts to corrode.
2) Ease of serviceability – basket access cap is “Fiber-Forged” with a hex nut and slot combination for easy removal.
3) Baskets – standard FRP or 316 stainless steel or polypropylene are available with most any size perforation.

Conley Basket Strainers are available in Epoxy, Vinyl Ester, and Furan resin liner systems in standard 60 mil or optional 100 mil liner thicknesses. All liners are reinforced with multiple layers of Nexus®.

Conley Basket Strainers

Conley Basket Strainers offer complete corrosion protection both internally and externally.

Corrosion resistance plays an important part of Conley Basket Strainers with the availability of Epoxy, Vinyl Ester or Furan liner systems in standard 60 mil or optional 100 mil liner thicknesses. All liners are reinforced with multiple layers of Nexus®.

Light weight is another feature of Conley Basket Strainers; weighing approximately one-third of their metal counterparts.

O-Ring Materials

VITON® Fluorelastomer

Fluorocarbon; excellent chemical compatibility with a wide range of temperature and concentrations. Can be used in most applications of mineral acids, chlorinated hydrocarbons, salt solutions and petroleum oils. Temperature rating of 20°F to 300°F.

HYPALON®

Chlorosulfonated polyethylene; recommended for sodium chloride, chromic acid, hydrofluoric acid, sulphuric acid, hydrocarbon oils, salts, and others. Temperature rating of -5°F to 150°F.

EPDM

Ethylene-propylene diene; recommended for ozone, phosphate, ester, ketones, alcohols, glycols, concentrated sulphuric acid, bleaching (20%), alkaline solutions in general, treated water (with caustic soda, sodium sulphate, chlorine), and hot water. Temperature rating of -30°F to 250°F.

BUNA-N

Nitrile rubber; a general purpose elastomer recommended for sealing of water, oil, mild solvents and petroleum products. Not recommended for strong acids, ketones or halogenated hydrocarbons. Excellent abrasion and tear resistance. Temperature rating of -40°F to 200°F.
INSTALLATION

The following is the proper procedure for installation of Conley Basket Strainers. Conley Basket Strainers mate with all Class 150 ANSI B16.5 flat face flanges. Use only full face gaskets with a minimum thickness of 1/8” and having a Durometer rating of 50-70 on the Shore “A” scale. Always use a spacer ring if mating with raised face flanges.

1) Make sure all surfaces on both the strainer and flange mating surface are clean.
2) Check bolt holes of mating flanges for alignment. Do not attempt to install strainers that do not have proper alignment.
3) Check flange dimensions versus strainer dimensions and include proper allowance of space for gaskets.
4) Use SAE flat washers under both bolt and nuts.
5) Insert lubricated bolts.
6) Check mating flange faces for excessive distance or gap. Do not attempt to install strainers that have excessive distances or gaps to mating flanges.
7) Tighten nuts/bolts diametrically in stages using a torque wrench. Uniform tightness across the face of the flange will eliminate gasket leaks.

BOLT TORQUE REQUIREMENTS

<table>
<thead>
<tr>
<th>Flange Size</th>
<th>Recommended Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ½”</td>
<td>15 ft lbs</td>
</tr>
<tr>
<td>2”-4”</td>
<td>25 ft lbs</td>
</tr>
<tr>
<td>6”</td>
<td>45 ft lbs</td>
</tr>
</tbody>
</table>

TORQUE SEQUENCE

[Diagram of torque sequence]
Basket Strainer
Dimensional Data* and Pressure Ratings(1) from –50° to 275°F

(1) Static pressure rating; steady (stationary) pressure is created when using a gear pump, turbine pump, centrifugal pump, etc.
(2) Vacuum Service: A full vacuum within the pipe is equivalent to 14.7 psi external pressure at sea level. Contact Conley Corp for higher external pressure ratings.

<table>
<thead>
<tr>
<th>NOM PIPE DIA</th>
<th>I.D. (IN)</th>
<th>NOM LINER THK (IN)</th>
<th>A FACE to FACE (IN)</th>
<th>B HEIGHT (IN)</th>
<th>C HEIGHT (IN)</th>
<th>WT (LBS)</th>
<th>INT PRESS (PSI)</th>
<th>VAC PRESS (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ½”</td>
<td>1.38</td>
<td>0.060</td>
<td>13 5/8”</td>
<td>11 15/16”</td>
<td>8”</td>
<td>13.5</td>
<td>150</td>
<td>1370</td>
</tr>
<tr>
<td>2”</td>
<td>1.88</td>
<td>0.060</td>
<td>13 5/8”</td>
<td>11 15/16”</td>
<td>8”</td>
<td>13.5</td>
<td>150</td>
<td>675</td>
</tr>
<tr>
<td>3”</td>
<td>3.00</td>
<td>0.060</td>
<td>19”</td>
<td>16 7/16”</td>
<td>10 ½”</td>
<td>25</td>
<td>150</td>
<td>160</td>
</tr>
<tr>
<td>4”</td>
<td>4.00</td>
<td>0.060</td>
<td>19 ¾”</td>
<td>20 ½”</td>
<td>14 7/8”</td>
<td>31</td>
<td>150</td>
<td>123</td>
</tr>
<tr>
<td>6”</td>
<td>6.00</td>
<td>0.060</td>
<td>20”</td>
<td>26 ¾”</td>
<td>18 ½”</td>
<td>50</td>
<td>150</td>
<td>82</td>
</tr>
<tr>
<td>8”</td>
<td>8.00</td>
<td>0.060</td>
<td>22 9/16”</td>
<td>33 ½”</td>
<td>25 ¼”</td>
<td>70</td>
<td>150</td>
<td>45</td>
</tr>
</tbody>
</table>

**FOR TECHNICAL INFORMATION ON STRAINERS SIZES 10” THROUGH 30” CONTACT CONLEY VALVE DIVISION AT 800-331-5502**

**SPECIFICATION DRAWING FLANGED BASKET STRAINER**

4 PBS-STRainers (04/10)
Y Strainer
Dimensional Data* and Pressure Ratings(1) from -50° to 275°F

(1) Static pressure rating; steady (stationary) pressure is created when using a gear pump, turbine pump, centrifugal pump, etc.

Vacuum Service: A full vacuum within the pipe is equivalent to 14.7 psi external pressure at sea level. Contact Conley Corp for higher external pressure ratings.

<table>
<thead>
<tr>
<th>SIZE IN.</th>
<th>NOM PIPE DIA</th>
<th>I.D. (IN)</th>
<th>NOM LINER THK (IN)</th>
<th>A FACE to FACE (IN)</th>
<th>B DIM (IN)</th>
<th>C HEIGHT (IN)</th>
<th>D DIM (IN)</th>
<th>INT PRESS (PSI)</th>
<th>VAC PRES (PSI)(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ½”</td>
<td>1.38</td>
<td>0.060</td>
<td>9 5/8”</td>
<td>6 1/8”</td>
<td>6 1/8”</td>
<td>5 1/8”</td>
<td>150</td>
<td>1370</td>
<td></td>
</tr>
<tr>
<td>2”</td>
<td>1.88</td>
<td>0.060</td>
<td>10 7/8”</td>
<td>7 7/16”</td>
<td>6 7/8”</td>
<td>6 1/8”</td>
<td>150</td>
<td>675</td>
<td></td>
</tr>
<tr>
<td>3”</td>
<td>3.00</td>
<td>0.060</td>
<td>14 3/16”</td>
<td>9 5/8”</td>
<td>8 7/16”</td>
<td>7 11/16”</td>
<td>150</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>4”</td>
<td>4.00</td>
<td>0.060</td>
<td>17 5/8”</td>
<td>11 1/32”</td>
<td>10 7/8”</td>
<td>31</td>
<td>150</td>
<td>123</td>
<td></td>
</tr>
</tbody>
</table>

FOR TECHNICAL INFORMATION ON STRAINER SIZES OVER 4” CONTACT CONLEY VALVE DIVISION AT 800-331-5502

SPECIFICATION DRAWING FLANGED “Y” STRAINER

PBS-STRAINERS (04/10) 5
Optional O-Ring Materials
Available in:
- EPDM
- Hypalon
- Buna N
- Other common elastomers

Factory Tested Replacement Parts
Conley Valve Division has a full range of replacement parts ready to install with minimum down time.

Typical Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>75°F</th>
<th>250°F</th>
<th>METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROSTATIC DESIGN BASIS</td>
<td>16,000 psi</td>
<td>8,000 psi</td>
<td>ASTM D2992 PROCEDURE B</td>
</tr>
<tr>
<td>HYDROSTATIC BURST (WALL STRESS @ 72°F)</td>
<td>32,000 psi</td>
<td>24,000 psi</td>
<td>ASTM D1599</td>
</tr>
<tr>
<td>DEGREE OF CURE</td>
<td>175°C (347°F) Tg</td>
<td></td>
<td>DMA</td>
</tr>
<tr>
<td>HEAT DEFLECTION TEMPERATURE</td>
<td>150°C (302°F)</td>
<td></td>
<td>ISO 75-3</td>
</tr>
<tr>
<td>FLOW FACTOR (HAZEN-WILLIAMS)</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURFACE ROUGHNESS</td>
<td>1.7 X 10^-5 FEET</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MANNING’S “n”</td>
<td>0.009 INCH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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