**ROUGHNECK® Polypropylene**

**Composite Hose Type 1181GGP and 3181PGP**

**Applications:** This type is designed for use as a Frac or Pump hose. User-friendly to make tight, effortless connections easier in a confined area. Unlike stiff rubber frac/pump hose Roughneck® is ozone resistant and remains flexible in all conditions, even subzero.

**Construction:**
- Color/Cover: 1181GGP Blue/PVC coated Nylon, Abrasion, UV and Ozone resistant
  - 3181PGP Blue black stripe/PVC coated Nylon, Abrasion and Ozone resistant
- Inner Wire: 1181GGP Galvanized Steel
  - 3181PGP Black Polypropylene coated steel
- Inner lining: High Grade Polypropylene
- Carcass: Polypropylene fabrics, films and seamless tubes
- Outer Wire: Galvanized Steel
- Logo: Roughneck®
- Extra: Special Color Coding and branding

**Physical properties:**
- Temperature Range: -22°F to +212°F (-30°C to +100°C)
- Maximum elongation: ≤10% on test pressure
- Vacuum range: 26 inHg (660 mmHg), 0.9 bar
- Electrical properties: Electrically Conductive
  - ≤2.5 ohm/m for sizes less than 2”
  - ≤1.0 ohm/m for size 2” and above

**Standards:** EN13765:2010, IMO, IBC, BS5842, NAHAD-600:2005

**End Fittings:** Specially designed end fittings have been developed for use with Willcox Composite hoses that have a unique leak-proof sealing face and specially machined helical spiral shank which engages into the corresponding internal helix wire when secured into the hose by either crimping or swaging the external ferrules. See page 28 for more information about end connections.

**TECHNICAL DATA: TYPE 1181GGP AND 3181PGP**

<table>
<thead>
<tr>
<th>Inside Diameter</th>
<th>Working Pressure</th>
<th>Min. Bend Radius</th>
<th>Approx Weight</th>
<th>Maximum Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inches</td>
<td>PSI</td>
<td>Inches</td>
<td>mm</td>
<td>lb/ft</td>
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<tr>
<td>3</td>
<td>80</td>
<td>200</td>
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<td>10</td>
<td>250</td>
<td>200</td>
<td>14</td>
<td>36</td>
</tr>
</tbody>
</table>

Pressure based on safety factor 4:1
Dimensions and weight are approximate and are subject to change
For additional technical data such as pressure drop, max. flow rates and tensile strength, please consult United Flexible engineering
Increased operating temperatures will reduce working pressure of the assemblies
Fitting pressure rating may limit or reduce the rated working pressure of the assembly
Rated working pressure is @ 70°F (21°C)