Parker Subsea Hydraulic Hoses
Blowout Preventer Umbilicals (BOP Hose), Hotlines and Stack Hoses
From topside connections, to plumbing the stack, Parker offers premier hose solutions for every aspect of hydraulic Blowout Preventer (BOP) controls.

Parker’s BOP umbilicals are used on offshore drilling rigs to control the subsea BOP stack. It is critical for the operators to have control over the BOP at all times, and Parker’s BOP umbilicals with Velocity Hose allow for precise control and faster response times when activating subsea valves on the BOP pod.

Parker also manufactures hotline hoses for BOP control. The hotline is the primary emergency hydraulic control line of the BOP system. If the BOP umbilical fails, the hotline would shut down the well valve and trigger the Emergency Disconnect System.

Parker’s stack hoses have a flexible and compact design making them ideal for efficient plumbing of the BOP stack’s hydraulic lines. Our stack hoses are available in blue, yellow and green for identification between primary and secondary systems.

Why Parker?

- Dependability and Experience
  Over 30 years of Oil & Gas thermoplastic hose design and engineering experience.

- Field Tested
  Over 750,000 feet of bundles and over 40 million feet of pilot hose produced for rigs.

- Capabilities
  BOP umbilical lengths up to 7,000ft and 90+ pilot hoses within 1 umbilical.

- Extended Service Life
  Lighter weight pilot line hoses with a smaller O.D. provide the possibility for more available spares and longer drilling in-service life.
BOP Umbilicals with Velocity Hose
Velocity hoses are lighter weight, have a smaller O.D. and a faster response time.

- **Superior Field Service Life/Drilling Time**
  Velocity hose also has a smaller O.D. which means Parker can produce BOP umbilicals with more pilot lines without increasing the O.D. of the umbilical. Customers can maintain their existing BOP clamping system for the umbilical and still get additional spares. Having additional spares means the umbilical can remain in service for longer, postponing the cost of the down time needed to replace it.

- **Faster Response Times**
  With the use of new materials and design technology, Parker redesigned the hose to reduce volumetric expansion over long lengths, providing the rig operators faster valve actuation, even in deeper waters.
  Parker BOP umbilicals can be customized to include both electrical power and signal lines.

- **Reduced Weight**
  Velocity hose is lighter weight than a traditional 4-layer fiber braid hose. Each drilling rig is certified for a maximum weight capacity, therefore, lighter weight hoses allow the rig operator to redirect the weight savings to other critical components, or add more hoses to the umbilical allowing for more spares.

<table>
<thead>
<tr>
<th>575LHN-3 (Traditional hose design)</th>
<th>575HVN-3 (Velocity Hose)</th>
</tr>
</thead>
<tbody>
<tr>
<td>69 x 3/16” Pilot Lines</td>
<td>x-sec 84 x 3/16” Pilot Lines</td>
</tr>
<tr>
<td>4.65” O.D.</td>
<td>4.65” O.D.</td>
</tr>
</tbody>
</table>

- 10 Spares → 25 Spares

BOP umbilical with added electrical signal cables
Velocity Hose

### Subsea Hotline Hoses - 575X

**575X:** For applications requiring lighter weight and increased flexibility:
- Aramid fiber reinforcement
- Available in long, continuous lengths up to 14,000 ft
- Optional secondary jacket of proprietary Polyurethane
- with a low coefficient of friction offers the highest level
  of abrasion resistance and increased service life

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nominal I.D.</th>
<th>Maximum O.D.</th>
<th>Maximum Working Pressure</th>
<th>Minimum Bend Radius</th>
<th>Typical Volume Exp. @ 5000 psi</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>inch</td>
<td>mm</td>
<td>psi</td>
<td>inch</td>
<td>cc/ft</td>
<td>lbs/ft</td>
</tr>
<tr>
<td>573HVN-3</td>
<td>0.20</td>
<td>5.1</td>
<td>.355</td>
<td>9.0</td>
<td>3,000</td>
<td>0.3</td>
</tr>
<tr>
<td>575HVN-3</td>
<td>0.20</td>
<td>5.1</td>
<td>.355</td>
<td>9.0</td>
<td>5,000</td>
<td>0.7</td>
</tr>
</tbody>
</table>

**Construction**
- Core tube: Polyamide
- Reinforcement: 2 spiral layers of aramid fiber
- Jacket: Polyurethane
- Core Identifiers: Blue (5,000 psi hose) Green (3,000 psi hose)

**Operating Parameters**
- Temperature Range: 
  -40°F to +131°F (-40°C to +55°C)
- Minimum Burst Pressure is 4 x Max. Working Pressure
- Maximum Elongation @ Working Pressure: ±2%

**Certifications**
- SAE J343
- DNV 2.9 No. 5-791.70
- ISO 13628-5

### Subsea Hotline Hoses - 575X

**Construction**
- Core tube: Polyamide
- Reinforcement: Braided aramid fiber
- Jacket: Polyurethane, optional secondary reinforcement jacket (also Polyurethane):
- Colors: Black

**Operating Parameters**
- Temperature Range: 
  -40°F to +212°F (-40°C to +100°C)
- Minimum Burst Pressure is 4 x Max. Working Pressure
- Max.Elongation @ W.P.: ±2%

**Certifications**
- SAE J343
- DNV 2.9 No. 5-791.70
**Hotline Hoses - 2390N**

2390N/2380N — For applications requiring high tensile strength and improved mechanical resistance:

- Steel wire reinforcement
- Available with two core tube options — PA12 or methanol-washed PA11
- Low dimensional change under pressure and a smooth bore for low pressure drop service life

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nominal I.D.</th>
<th>Maximum O.D.</th>
<th>Maximum Working Pressure</th>
<th>Minimum Bend Radius</th>
<th>Typical Volume Exp. @ 5000 psi</th>
<th>Weight</th>
<th>Maximum Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>2390N-16Vxx</td>
<td>1.0</td>
<td>25.2</td>
<td>35.0</td>
<td>4,060</td>
<td>28.0</td>
<td>1.17</td>
<td>5,000</td>
</tr>
<tr>
<td>2380N-16Vxx</td>
<td>1.0</td>
<td>25.2</td>
<td>37.0</td>
<td>5,510</td>
<td>38.0</td>
<td>1.49</td>
<td>4,000</td>
</tr>
</tbody>
</table>

**Construction**

- Core tube: Polyamide
- Reinforcement: 575X - Braided aramid fiber
- 2440N - High strength wire
- Jacket: Polyurethane
- Optional secondary reinforcement jacket (also Polyurethane): 2440N PA12
- Colors: Black

**Operating Parameters**

- Temperature Range: -40°F to +212°F (-40°C to +100°C)
- Minimum Burst Pressure is 4 x Max. Working Pressure
- Max. Elongation @ W.P.:
  - 575X ±2%
  - 2440N +2% / -1.5%

**Certifications**

- 575X
  - SAE J343
  - DNV 2.9 No. 5-791.70
- 2440N
  - ISO 13628-5
Subsea Blowout Preventer Stack Hoses

Parker’s BOP stack hoses have a flexible, compact design with a low minimum bend radius which makes them the ideal choice for efficient plumbing of BOP stack hydraulic lines.

- Available with blue, yellow or green jacket colors for POD identification
- Low volumetric expansion
- Smooth bore for low pressure drop
- Sea-water resistant polyurethane jacket
- For use with specially designed subsea fittings that prevent water ingestion
  - Dual Seal Flange and JIC connections
  - Offered in 45° and 90° bent tube configurations, as well as, straight fittings

### Construction
Core tube: Thermoplastic polyamide
Reinforcement: 2 closed spiral layers and 2 open spiral layers of high strength wire
Jacket: Sea water resistant Polyurethane
Colors: Blue, Green or Yellow

### Operating Parameters
Temperature Range:
-40°F to +212°F (-40°C to +100°C) at a 4:1 design factor; Max of +158°F (+70°C) for water, glycol or methanol-based fluids
Max. Elongation @ W.P.: +2% / -1.5%
Minimum Burst Pressure is 4 x Max. Working Pressure

### Part Number Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Color</th>
<th>Nominal I.D.</th>
<th>Maximum O.D.</th>
<th>Maximum Working Pressure</th>
<th>Minimum Bend Radius</th>
<th>Typical Volume Exp. @ W.P.</th>
<th>External Pressure Resistance*</th>
<th>Weight</th>
<th>Design Factor</th>
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<tbody>
<tr>
<td>2390N-08V12</td>
<td>Blue</td>
<td>0.5</td>
<td>12.8</td>
<td>0.80</td>
<td>5,000</td>
<td>34.5</td>
<td>5.9</td>
<td>150</td>
<td>5%</td>
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<tr>
<td>2390N-08V13</td>
<td>Green</td>
<td>0.5</td>
<td>12.8</td>
<td>0.80</td>
<td>5,000</td>
<td>34.5</td>
<td>5.9</td>
<td>150</td>
<td>5%</td>
</tr>
<tr>
<td>2390N-08V16</td>
<td>Yellow</td>
<td>0.5</td>
<td>12.8</td>
<td>0.80</td>
<td>5,000</td>
<td>34.5</td>
<td>5.9</td>
<td>150</td>
<td>5%</td>
</tr>
<tr>
<td>2390N-16V12</td>
<td>Blue</td>
<td>1.0</td>
<td>25.2</td>
<td>1.38</td>
<td>35.0</td>
<td>4060/5002*</td>
<td>28/34.5*</td>
<td>11.0</td>
<td>280</td>
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<tr>
<td>2390N-16V16</td>
<td>Yellow</td>
<td>1.0</td>
<td>25.2</td>
<td>1.38</td>
<td>35.0</td>
<td>4060/5002*</td>
<td>28/34.5*</td>
<td>11.0</td>
<td>280</td>
</tr>
<tr>
<td>2380N-16V12</td>
<td>Blue</td>
<td>1.0</td>
<td>25.2</td>
<td>1.46</td>
<td>37.0</td>
<td>5,510</td>
<td>38.0</td>
<td>11.4</td>
<td>290</td>
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<tr>
<td>2380N-16V16</td>
<td>Yellow</td>
<td>1.0</td>
<td>25.2</td>
<td>1.46</td>
<td>37.0</td>
<td>5,510</td>
<td>38.0</td>
<td>11.4</td>
<td>290</td>
</tr>
</tbody>
</table>

* Design Factor 4 = 4060; 3.24 = 5002
**Typical value is ≥ value shown in table at minimum bend radius acc. to ISO 13628-5.