### Single-Acting, Intermittent Duty Pumps

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>HP</th>
<th>Max. Displacement</th>
<th>Max. Pressure</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS-2400</td>
<td>125</td>
<td>12400</td>
<td>3156</td>
<td>CAS</td>
</tr>
<tr>
<td>WS-2600</td>
<td>125</td>
<td>12400</td>
<td>3156</td>
<td>CAS</td>
</tr>
<tr>
<td>WS-3400</td>
<td>125</td>
<td>12400</td>
<td>3156</td>
<td>CAS</td>
</tr>
</tbody>
</table>

### Bear Single-Acting, Continuous Duty Pumps

<table>
<thead>
<tr>
<th>Pump Model</th>
<th>HP</th>
<th>Max. Displacement</th>
<th>Max. Pressure</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD-165M</td>
<td>100</td>
<td>10400</td>
<td>2600</td>
<td>FCSTL</td>
</tr>
<tr>
<td>BD-120MC</td>
<td>100</td>
<td>10400</td>
<td>2600</td>
<td>FCSTL</td>
</tr>
<tr>
<td>BQ-100H</td>
<td>100</td>
<td>10400</td>
<td>2600</td>
<td>FCSTL</td>
</tr>
<tr>
<td>BQ-100M</td>
<td>100</td>
<td>10400</td>
<td>2600</td>
<td>FCSTL</td>
</tr>
</tbody>
</table>

*Note: BQ-100 H is available in nickel plated ductile iron.*

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For your nearest National Oilwell Varco distributor, call 918 447 4600.

For more information on these pumps, visit our website at www.nov.com/recip.
### Fluid-end Expandables

NOV is the industry leader in the design, manufacture, and supply of fluid-end expandables. We are the industry innovator of premium pump expendables including tungsten carbide plungers, numerical valve assemblies, and premium pump packing.

### Additional Services

Value added utilization services, global technical support, and the world's largest distribution network provide unmatched value in the industry.

### Typical Applications for NOV Reciprocating Pumps

- **Oilfield**
  - Tracing Fluids
  - Frac Water
  - Downhole Pump
  - Rig Water
  - Frac Sand
  - Wellhead Fluids
  - Core Sampling
  - Geothermal

- **Chemical Processing**
  - Acidic Service
  - Corrosion Inhibitor
  - Polyacrylate
  - Polyelectrolyte

- **Plastics Processing**
  - Recycled Polyethylene
  - Recycled Polypropylene
  - Recycled Polyvinyl Chloride

- **Food Processing**
  - Vacuum (Dry)
  - Vacuum (Wet)

- **Marine Service**
  - Salt Water Disposal
  - Open Hearth Cleaning
  - Waste Disposal

- **Chemical Feed**
  - Riser Boost
  - Surface Unit for Hydraulic Jet Pump

- **Desalination**
  - reverse osmosis (RO)

- **Horizontal Drilling with Bentonite**

- **Masonry Cleaning**

### Available in Simplex, Duplex, Triplex, and Quintuplex designs, with the industry’s largest array of Single-Acting Quadruple models available anywhere.

### Quick Reference Pump Selection

#### Single-Acting, Continuous Duty Pumps

<table>
<thead>
<tr>
<th>Pump Model No.</th>
<th>Minimum Flow (l/s)</th>
<th>Maximum Flow (l/s)</th>
<th>Minimum Pressure (psi)</th>
<th>Maximum Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1111</td>
<td>0.5</td>
<td>10</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>1111</td>
<td>0.5</td>
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</tr>
</tbody>
</table>

**Table Key**

- **Black**: Primary models
- **Blue**: Expensive models available
- **Red**: Expensive models available
- **Bold**: Largest available

#### Single-Acting, Continuous Duty Pumps (continued)

<table>
<thead>
<tr>
<th>Pump Model No.</th>
<th>Minimum Flow (l/s)</th>
<th>Maximum Flow (l/s)</th>
<th>Minimum Pressure (psi)</th>
<th>Maximum Pressure (psi)</th>
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<td>150</td>
</tr>
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<td>50</td>
<td>150</td>
</tr>
</tbody>
</table>

**Table Key**

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#### Double-Acting, Continuous Duty HX Pumps

<table>
<thead>
<tr>
<th>Pump Model No.</th>
<th>Minimum Flow (l/s)</th>
<th>Maximum Flow (l/s)</th>
<th>Minimum Pressure (psi)</th>
<th>Maximum Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1111</td>
<td>0.5</td>
<td>10</td>
<td>50</td>
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</tr>
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<td>0.5</td>
<td>10</td>
<td>50</td>
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<td>1111</td>
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<td>10</td>
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<td>150</td>
</tr>
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**Table Key**

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### Notes

- Applications at pressures above 15,000 PSIG must be approved by NOV’s Engineering Department.
- For more information, visit www.nov.com/recip

### NOV National Oilwell Varco

National Oilwell Varco is the industry leading manufacturer of reciprocating pumps. Our product availability in single acting and double acting models, four horsepower ranges from 3 to 150 HP.

**Fluid-end Materials**

- All of our pumps are equipped with a diverse range of fluid-end materials that provide superior resistance to erosion, corrosion, and stress cracking.

**Design**

- Available in Simplex, Duplex, Triplex, and Quintuplex designs, with the industry’s largest array of Single-Acting Quadruple models available anywhere.

**Manufacturer of Reciprocating Pumps**

- NOV is the industry leading manufacturer of reciprocating pumps. Our product availability in single acting and double acting models, four horsepower ranges from 3 to 150 HP.

www.nov.com/recip