Downtime is expensive. Protect your bottom line with quality products from Viatran.

For half a century, Viatran has been solving pressure and level measurement problems in some of the world’s toughest application environments. With a long-standing reputation of superior construction and rugged performance, Viatran pressure and level transmitters have been meeting the demands of the oil and gas industry in drilling, secondary recovery, offshore and land-based production.

From the North Slope of Alaska to the Sahara Desert, oil rig environments require process instruments that must be able to withstand constant subjection to changing pressure, temperature, humidity, corrosion, vibration and shock. Viatran products measure up to each task.

Viatran's substantial expertise in oil and gas allows us to provide outstanding solutions and support upon which you can depend for durable quality and fast service to keep your operation up and running efficiently.

The Value of Viatran to Your Operation

Viatran value is measured in maximum reliability and minimal repair, unlike products that result in less durability and more downtime for replacement. Viatran value is worth your investment for the long run:

- **PRODUCTS**
  50 years of proven solutions

- **TECHNICAL SUPPORT**
  Expert problem solvers

- **CUSTOMER SERVICE**
  Fast, friendly and honest

Viatran products are designed to promote oil rig safety at every turn, solving any problems that may occur quickly and easily—with maximum productivity and minimum downtime.

Our rugged pressure sensors and transmitters are renowned for providing robust performance and reliable pressure measurement in the even the toughest environments.
Key players in the Oil and Gas industry rely on Viatran because our products are proven, our technical expertise is deep and our service team is laser focused on helping our customers grow their business.

Viatran pressure transmitters play a major role in maintaining safety on an oil rig. In order to monitor product, process and hydraulic pressures, our transmitters reliably trigger safety shut-downs when hazardous conditions are detected. Viatran addresses specific pressure transmitter applications on oil rigs, including measuring ballast tank levels and hydraulic pressure on jack-up drilling rigs, as well as pressures on platform flow lines, additive metering pumps, subsea injection valves and well cleanouts.

<table>
<thead>
<tr>
<th>ID</th>
<th>Application</th>
<th>Sensor Purpose</th>
<th>Viatran Transmitter Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hook Load</td>
<td>Measure weight of drill string</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Top Drive</td>
<td>Measure hydraulic pressure for control systems</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>Standpipe</td>
<td>Measure standpipe pressure</td>
<td>X X</td>
</tr>
<tr>
<td>4</td>
<td>Iron Roughneck</td>
<td>Measure torque while attaching drill pipe using hydraulic pressure measurements</td>
<td>X X</td>
</tr>
<tr>
<td>5</td>
<td>Catwalks</td>
<td>Measure hydraulic pressure</td>
<td>X X X X</td>
</tr>
<tr>
<td>6</td>
<td>Accumulator Unit</td>
<td>Measure inlet/outlet pressure</td>
<td>X X</td>
</tr>
<tr>
<td>7</td>
<td>Water Reservoir or Tank Levels</td>
<td>Measure fluid levels</td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td>Rig Hydraulic Lift</td>
<td>Measure hydraulic pressure, monitor raising or lowering of deck for directional drilling</td>
<td>X X</td>
</tr>
<tr>
<td>9</td>
<td>Choke Manifold</td>
<td>Measure manifold pressure</td>
<td>X X</td>
</tr>
<tr>
<td>10</td>
<td>BOP (Blowout Protector)</td>
<td>Measure wellhead pressure</td>
<td>X X</td>
</tr>
<tr>
<td>11</td>
<td>Power Generation Units</td>
<td>Measure lube oil, water &amp; hydraulic fluid pressures</td>
<td>X X X X</td>
</tr>
<tr>
<td>12</td>
<td>Fluid Manifold</td>
<td>Measure drilling fluid pressure</td>
<td>X X X X</td>
</tr>
<tr>
<td>13</td>
<td>Mud Return Line</td>
<td>Measure drilling mud pressure to monitor &amp; control mud flow</td>
<td>X X</td>
</tr>
<tr>
<td>14</td>
<td>Mud Pump (Inlet Pressure)</td>
<td>Measure pressure &amp; flow of mud media</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Mud Pump (Outlet Pressure)</td>
<td>Measure pressure &amp; flow of mud media</td>
<td>X X</td>
</tr>
<tr>
<td>16</td>
<td>Transmission Pressure</td>
<td>Measure pressure of transmission oil</td>
<td>X</td>
</tr>
<tr>
<td>17</td>
<td>Mud Pump (Lubrication)</td>
<td>Measure pressure of lube oil lines</td>
<td>X</td>
</tr>
<tr>
<td>18</td>
<td>Water Reservoir or Tank Levels</td>
<td>Measure fluid levels</td>
<td></td>
</tr>
</tbody>
</table>
VIATRAN PRESSURE SENSORS IN OIL RIG APPLICATIONS

Designed for rugged environmental conditions

1. **Hook Load**
   Measure weight of drill string
   Model 570

2. **Top Drive**
   Measure hydraulic pressure for control systems
   Models 570, 571

3. **Standpipe**
   Measure standpipe pressure
   Models 511, 521

4. **Iron Roughneck**
   Measure torque while attaching drill pipe using hydraulic pressure measurements
   Models 570, 571

5. **Catwalks**
   Measure hydraulic pressure
   Models 570, 571, 347

6. **Accumulator Unit**
   Measure inlet/outlet pressure
   Models 570, 571

7. **Water Reservoir or Tank Levels**
   Measure fluid levels
   Model DLT

8. **Rig Hydraulic Lift**
   Measure hydraulic pressure, monitor raising or lowering of deck for directional drilling
   Models 570, 571

9. **Choke Manifold**
   Measure manifold pressure
   Models 511, 521

10. **BOP (Blowout Protector)**
    Measure wellhead pressure
    Models 570, 571
**Power Generation Units**
Measure lube oil, water and hydraulic fluid pressures
Models 570, 571, 347

**Fluid Manifold**
Measure drilling fluid pressure
Models 511, 521, 570, 571

**Mud Return Line**
Measure drilling mud pressure to monitor and control mud flow
Models 511, 521

**Mud Pump (Inlet Pressure)**
Measure pressure and flow of mud media
Model 385

**Mud Pump (Outlet Pressure)**
Measure pressure and flow of mud media
Models 511, 521

**Transmission Pressure**
Measure pressure of transmission oil
Model 347

**Mud Pump (Lubrication)**
Measure pressure of lube oil lines
Model 347

**Water Reservoir or Tank Levels**
Measure fluid levels
Model DLT
PERFORMANCE AND RELIABILITY

Solutions custom-fit to your application

511 Hammer Union (Figure 1502)
MWD, Mud Pump Pressure
- The workhorse of the oil patch with patented vibration and shock-resistant design eliminating fluid ingress
- Easy access connector housing with a 77% greater area
- NACE Compliant (MRO175-2009 & ISO 15156)
- FM, IECEx, ATEX and PED approvals available
- Repairable and field adjustable

521 Hammer Union (Figure 2002)
Pump Discharge Pressure
- Hammer Union pressure transmitter for use in oil well cementing, fracturing and acidizing
- Shock and vibration resistant
- External adjustments
- Pressure up to 25,000 PSI (1,724 bar)
- FM, IECEx, ATEX and PED approvals available

570 Hazardous Location
Rig Safety
- A better alternative to conventional process transmitters in a reliable, cost-effective, watertight/submersible design
- All stainless steel construction and lightweight to enable direct mounting on process piping
- Exotic wetted materials available
- FM, ATEX, CSA and PED approvals available
- Pressure up to 100,000 PSI/PSIA (7,000 bar)

571 Hazardous Location
Rig Safety
- All welded stainless steel, watertight/submersible design
- Field rangeable
- Hermetically sealed - magnetically coupled adjustments
- FM, ATEX, CSA and PED approvals available
- Pressure up to 100,000 PSI/PSIA (7,000 bar)

347 General Purpose
Lube Oil & Transmission
- Low-cost, rugged pressure transmitter provides a reliable measurement solution
- Sealed and stable
- Resistant to pressure spikes
- Welded stainless steel construction

385 Flush Tip
Mud Pump Inlet Pressure
- Zero cavity design*
- Isolated sensor design virtually eliminates torque effect on output signal
- Solid stainless steel machined diaphragm
- Withstands pressure spikes up to 5x proof and 20x burst pressure
- Fully welded and sealed housing impervious to fluid ingress
*Patents Pending

3829 Forest Parkway, Suite 500
Wheatfield, NY 14120
International: 1-716-629-3800
Toll Free: 1-800-688-0030
Fax: 1-716-693-9162
Email: solutions@viatran.com
Web: www.viatran.com

Contact Viatran directly or your local representative