SIMOTICS™ from Siemens — the first name in motors — includes a complete line-up of drilling duty motor solutions for oil and gas applications.

The industry leading AC motors and hazardous duty AboveNEMA motors produced at Siemens Norwood manufacturing plant in Ohio and our water jacket cooled LOHER™ motors manufactured at our German manufacturing plant are unrivaled when it comes to reliability, ruggedness, compactness, efficiency, precision, and performance.

Each comes with over 150 years of motor design and manufacturing experience built right in — a pedigree unmatched by anyone. And our global service coverage including parts and technical support is the most extensive in the world — providing an exceptional level of confidence and unrivaled peace of mind.

Siemens understands — your production numbers define your success. And there’s never any time for downtime. When you choose a partner to supply motors for your land rigs, you are making a decision that you will have to live with for years. There’s no better choice than SIMOTICS™. Proven. Versatile. Strong. And simple to maintain. Everything you expect in a drill rig motor is precisely what Siemens delivers.

**Standard Features**
- Form Wound Class H MiCLAD™ Insulation with Kapton
- Double end to center cooling system for superior cooling
- Induction brazed copper bar rotor
- Stator RTDs (9) – 100 Ohm Platinum 3 / Phase with spares
- IP23 Enclosure
- Siemens ID1 auxiliary blower assembly with mechanical filter
- Auxiliary lockout switch
- Field movable IP56 main terminal box (A to B side) with bus bar connections
- Fabricated steel frame with fabricated steel end shields
- Tapered 4340 steel shaft with IP56 Seal and hub
- 304 stainless steel hardware
- Ambient range -40°C to 45°C
- Differential Pressure Switch
- Space Heater

Because There’s Never a Good Time for Downtime...
SIMOTICS™ BAC1150

- Drawworks
- Mud Pumps
- Rotary Tables

SIMOTICS™ was designed for Exceptional Reliability.

<table>
<thead>
<tr>
<th>Optional Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Both bearings insulated with ground strap</td>
</tr>
<tr>
<td>• IP44 Enclosure</td>
</tr>
<tr>
<td>• Stainless steel main terminal box</td>
</tr>
<tr>
<td>• Extreme / Harsh Duty paint and custom colors</td>
</tr>
<tr>
<td>• Up to 55°C Ambient</td>
</tr>
<tr>
<td>• Class 1, Zone 2, groups IIA, IIB + Hydrogen</td>
</tr>
<tr>
<td>• Class 1, Div 2, groups BCD, T3</td>
</tr>
<tr>
<td>• “C” face encoder</td>
</tr>
</tbody>
</table>

SIMOTICS™ BAC1150 is an exceptional solution for drilling applications — designed specifically for Mud Pumps, Drawworks, and Rotary Tables built right here in America.

The rugged design is developed to withstand the high torque and extreme conditions encountered in drilling applications. The superior cooling system, with double end to center air flow design, results in lower overall temperatures. Design innovations like these allow the SIMOTICS™ BAC1150 motor to perform with maximum reliability for years of trouble-free service, delivering optimal rig performance, and supporting rapid well drilling.

Siemens AC drilling motors help ensure rig operations consistently achieve maximum efficiency, while delivering the peace of mind that comes from reliable operations. Confidently drill deeper, faster, and longer while reducing operating costs with SIMOTICS™ BAC1150.

### Continuous Rating vs. Drawworks Duty Cycle

<table>
<thead>
<tr>
<th></th>
<th>Continuous Rating</th>
<th>Drawworks Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP (kW)</td>
<td>1150 (858)</td>
<td>1400 (1044)</td>
</tr>
<tr>
<td>Torque, lb-ft (Nm)</td>
<td>7550 (10240)</td>
<td>9191 (12461)</td>
</tr>
<tr>
<td>Volts, VAC*</td>
<td>587</td>
<td>587</td>
</tr>
<tr>
<td>Current, Amps</td>
<td>1054</td>
<td>1271</td>
</tr>
<tr>
<td>Synchronous Speed, rpm</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>Max speed, rpm</td>
<td>3000</td>
<td></td>
</tr>
</tbody>
</table>

*575 - 690V is available
AT HOME IN THE FIELD
Bug Blower
- SIMOTICS™ XP100 ID1

Desander/Desilter
- SIMOTICS™ XP100 ID1
  (feed pumps)

Drawworks
- SIMOTICS™ BAC1150
- SIMOTICS™ XP100 ID1
  (blower)
- LOHER™ Water Jacket Ex d

Drilling Fluid Equipment
- SIMOTICS™ XP100 ID1
  (blower)

Mud Agitator
- SIMOTICS™ XP100 ID1

Mud Pumps
- SIMOTICS™ BAC1150
- LOHER™ Water Jacket Ex d
- SIMOTICS™ XP100 ID1
  (blower)
- SIMOTICS™ XP100 ID1
  (feed pumps)

Rotary Table
- SIMOTICS™ BAC1150
- SIMOTICS™ XP100 ID1
  (blower)
- LOHER™ Water Jacket Ex d

Shale Shaker
- SIMOTICS™ XP100 ID1
SIMOTICS™ XP100 ID1 meets or exceeds NEMA® motor standards and are the ideal choice for the world’s toughest and harshest operating environments. SIMOTICS™ XP100 ID1 motors feature a cast iron frame and bearing housings that utilize the same design philosophy that goes into the design of all our renowned severe duty motors—ruggedness, reliability, performance, and efficiency.

Siemens XP100 ID1 explosion proof motors are UL® listed and CSA certified for gas and dust ignition-proof environments and suitable for drill rig duty in Class 1, Group D, Division 1 hazardous locations.

**Robust Quality that will not Quit**

Though you probably will never see them, the materials within these motors have been specially selected to provide high performance and long service life. For example, the insulation materials used for the windings result in an exceptional anti-corona system. This system is designed to withstand voltage spikes caused by fast switching IGBTs from adjustable speed drives.

Each die cast aluminum rotor assembly is dynamically balanced for extended bearing life, and includes a high strength carbon steel (C1045) shaft for maximum rotor performance.
The LOHER™ Water Jacket Ex d motors from Siemens is internationally renowned as an exceptionally high quality motor for a range of core functions on drilling rigs, including purging pumps, hoisting gear, and rotary tables. The Ex d motor delivers the exceptional efficiency, reliable ruggedness, compact dimensions, high efficiency, and unrivaled availability expected from a global category leader.

Economical, safe, and incredibly reliable
Flameproof encapsulated motors from LOHER — one of the world’s leading manufacturers of explosion-protected drive systems — set themselves apart by virtue of a number of significant design advantages. The motors are especially quiet when compared to air-cooled motors, a feature that plays an important role in protecting operating personnel and maintaining environmental regulations. Operating costs are significantly lower as a result of the motor’s extraordinary efficiency and minimal maintenance requirements.

These explosion-protected motors offer the highest levels of safety, meeting or exceeding the most stringent regulatory requirements. Field proven reliability in the most adverse operating environments ensures longevity and maximum uptime in oil and gas drilling operations.

<table>
<thead>
<tr>
<th>Shaft Heights</th>
<th>450 - 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP (kW)</td>
<td>1200 - 2480 (890-1850 kW)</td>
</tr>
<tr>
<td>Volts, VAC</td>
<td>690 - 11000</td>
</tr>
<tr>
<td>Thermal classification 155 (F), utilized to 130 (B)</td>
<td>II 2 G Ex de IIB (IIC) T4</td>
</tr>
<tr>
<td>Winding utilization</td>
<td>Thermal classification 155 (F), utilized to 130 (B)</td>
</tr>
<tr>
<td>Number of poles</td>
<td>2 - 8</td>
</tr>
<tr>
<td>Standard Protection</td>
<td>IP 56</td>
</tr>
</tbody>
</table>
Quality Manufacturing
From design to materials to workmanship, quality is built into every Siemens motor, the result of more than 100 years of experience capped with today's advanced quality control procedures used in our Certified Quality Performance Program.

Comprehensive Service and Support
Siemens warranty, parts and service request call center is available 24/7, providing customers a single point of contact with efficient service and fast response times. Siemens service technicians take pride in finding the right solution, the first time, every time.

Contact Siemens Services
Telephone: 800-333-7421 (Toll Free)
423-262-5710 (Outside U.S.)
Online: www.siemens.com/automation/support-request

Siemens Motors and Drives – Performance-Matched Systems
Performance-matched variable-speed motors and drives from Siemens make perfect sense. They are designed to work in harmony for ease of selection and start up, as well as long-term reliability and exceptional performance. Whether your application requires variable torque or constant torque capability in general purpose or severe duty environments, there is a Siemens motor / drive system ready to go to work for you.