

Ward Leonard High Power Density Drilling Motors

Purpose-Built
Technology for
Top Drives,
Mud Pumps and
Drawworks



Ward Leonard

Excellence in Motor and Control Solutions™

The background is a dark blue field filled with numerous diagonal streaks of light in shades of blue and white. A prominent, thick horizontal band of red and white light streaks cuts across the middle of the image, creating a sense of motion and energy.

**Power
drives industry.**

**More power
revolutionizes it.**

More Horsepower. More Torque. Same Standard Frame Size.

Everything You Need to Supercharge Your Rig Site.

Power. Ever since the first motor was invented, we have always want more of it. That quest has driven us to go faster, fly higher, explore deeper, drill smarter, and develop innovations that revolutionize industries and the way we live.

Now, after over 50 years of adapting locomotive traction motors for oilfield use, Ward Leonard has developed **the industry’s only line of high performance, high power density AC induction motors purpose-built for top drives, mud pumps, drawworks and rotary tables.**

KEY FEATURES:

By utilizing applied physics and state-of-the-art numerical analysis software, each motor features:

- ♦ Identical frame sizes and weights of standard, lower horsepower motors
- ♦ Proprietary intra-slot cooling technologies
- ♦ Fully optimized copper-to-steel ratios
- ♦ Improved coil slot & bar geometries
- ♦ Systematic electrical stress testing pre-delivery

KEY BENEFITS:

With reliable, durable motors on over 600 rigs worldwide, Ward Leonard customers are now able to:

- ♦ Drill deeper, faster and more efficiently
- ♦ Make longer horizontal runs
- ♦ Increase pump pressure
- ♦ Punch the drill string harder
- ♦ Easily retrofit existing applications without changing equipment designs
- ♦ Improve portability of assets from site to site
- ♦ Reduce overall transportation and road weight fees
- ♦ Lower total motor lifecycle costs

High power density motors. More horsepower, more torque, same standard motor frame size.

Only from Ward Leonard — continuously developing advanced technology solutions that enable our customers to achieve peak power performance.



Specifications	Up To 50% More Horsepower		Up To 33% More Horsepower		Up To 17% More Horsepower		Up To 33% More Horsepower		
Model #	WL250040	WL12BB060	WL13BB080	WL16BC080	WL20BC135	WL22BC135	WL29BC160	WL29BC180	WL29BC200
Horsepower	450	600	800	800	1350	1350	1600	1800	2000
Frame Size	Standard 400HP Frame		Standard 600HP Frame		Standard 1150HP Frame		Standard 1500HP Frame		
Torque (lbf-ft)	1810	2725	2670	3210	8940	8940	9500	9590	10,700
Voltage (AC)	575	575	575	575	575	575	575	575	575
Frequency (Hz)	40	40	60	50	40	40	45	50	50
Full Load Current (Amps)	410	500	580	570	1120	1120	1590	1610	1775
Operating Speed (RPM)	1161	1156	1180	982	793	793	887	986	982
Max Speed (RPM)	3200	3200	2360	2400	2300	3200	3000	3000	3000
Windings	Random	Form	Form	Form	Form	Form	Form	Form	Form
Mounting	Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal	Vertical	Horizontal	Horizontal	Horizontal	Horizontal
Base Motor Weight (lbs)	2800	2800	4000	4000	6000	6000	7500	7500	7500
Certifications Available				ATEX	CSA	ABS	DNV		

Applications



Speak with a Ward Leonard engineer today.
Contact us at (860) 283-5801, or visit www.wardleonard.com.



Ward Leonard is a global industrial technology company that designs, engineers and manufactures integrated motor and control solutions for a diverse range of Oil & Gas, Heavy Industry and Military customers. For more than 120 years, our innovative products have consistently harnessed power for complex, technical and mission-critical infrastructure applications in the world's most demanding environments. We are dedicated to total customer support and satisfaction, and to delivering benchmark performance, productivity and durability to our customers.

To learn more about our products and services, or to speak with a Ward Leonard engineer, visit www.wardleonard.com

Powering Naval Supremacy

Ward Leonard has developed cutting-edge motors and controls that meet tough Mil-Spec standards for more than a century. Our innovative solutions play an integral role in delivering power for submarines, surface vessels and land defense systems.



Photo courtesy of the U.S. Navy

Powering Heavy Industry

From mining and material handling to nuclear power plants, our motors and controls harness power for mission-critical applications where performance, safety and reliability are of vital importance.



Ward Leonard

Excellence in Motor and Control Solutions™

401 Watertown Road
Thomaston, CT 06787

◆ 860.283.5801

www.wardleonard.com

Ward Leonard's motor portfolio offers the following certifications:



ABS-certified



ISO 9001:2008-certified



ATEX-approved



CSA-approved



CETL-approved

© 2015 Ward Leonard CT LLC.
All rights reserved. 4/2015