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About Us

Comprehensive Power Inc. was founded in 1998 by Frank Jones to design and build innovative energy solutions. Our design, prototyping and manufacturing facilities are located at our headquarters in Marlborough, Massachusetts. We have a talented and unique staff at Comprehensive Power - we thrive on the challenges of controlling large currents in small spaces, handling powerful magnets and designing sensitive control electronics that live alongside high-power devices.

Comprehensive Power is a privately held company and an equal opportunity employer.

To learn more about employment at Comprehensive Power, please contact hr@comprehensivepower.com.

- [Management Team](#)

Comprehensive Power Inc. - 508 460-0010

Applications: Dynamic Energy Solutions

Energy is a precious commodity in every industry, and Comprehensive Power products ensure that energy is put to good use. We work with our customers to look at the big picture for overall efficiency. For example, our advanced controls allow power systems to run only as needed, saving precious fuel at remote locations. See how Comprehensive Power is delivering the power in your industry.

[Alternative Energy](#)

[Oilfield](#)

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Controls: Optimizing Performance

In most applications, the ultimate energy efficiency of the system is affected as much by the controls as by the power components – delivering power when needed, and saving or recycling the power when possible. We have extensive experience in hardware and software at each level of the system architecture, including:

Embedded controls using digital signal processors (DSP's) in high power environments.

Distributed controls with numerous microprocessors and DSP's with local responsibility communicating over shared or dedicated networks for global coordination.

PC-based control and monitoring for system coordination, automated testing, qualification and data logging.

Operator interfaces using graphical user interfaces on PCs for maximum flexibility.

Control Panels with non-contact knobs and switches present a familiar, rugged feel to the operator but have the safety and reliability of solid state electronics inside.

Other Comprehensive Power Products:

- [Permanent Magnet Motors](#)
- [Drive Systems](#)
- [Electro-magnetic Actuators & Sensors](#)
- [Generators](#)

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Generators: Harnessing Power

Permanent magnet generators are the choice for many renewable energy applications, including wind, wave and tidal power. Comprehensive Power is able to design and build generators capable of harvesting the maximum amount of energy by working over a broad range of conditions.

Permanent magnet construction and our patented nested coil technology provides the highest power density in the industry. PM generators are self-exciting eliminating the need for external power.

Our generators have good efficiency across a wide range of loads and operating speeds, which often eliminates the need for cumbersome gears and transmissions.

We have experience working with a broad range of prime movers, including wind, waves, hydraulics and diesel engines. For example, our hydraulic-electric power supplies convert hydraulic flow into stable DC voltage, providing remote electric power without wires.

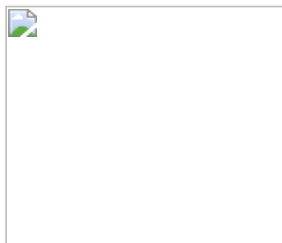
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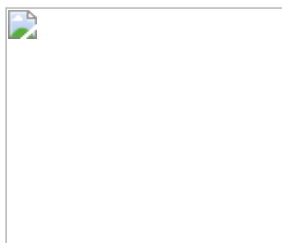
Management Team



Franklin B. Jones, President

Frank Jones has twenty five years of experience in the design and fielding of high power density electronic and electromechanical systems for industrial and military applications. Prior to founding Comprehensive Power in 1998, he was Advisory Engineer for power electronics at Kaman Electromagnetics Corporation and a Fellow Engineer for Power Technologies at the Westinghouse Electronic Systems Center. He has led numerous successful development projects, including electric drive systems for ships, aircraft simulators and land vehicles; electric drives for oil drilling and pumps; high frequency resonant and phase shift controlled power converters; high and low voltage pulse modulators; and radar transmitters.

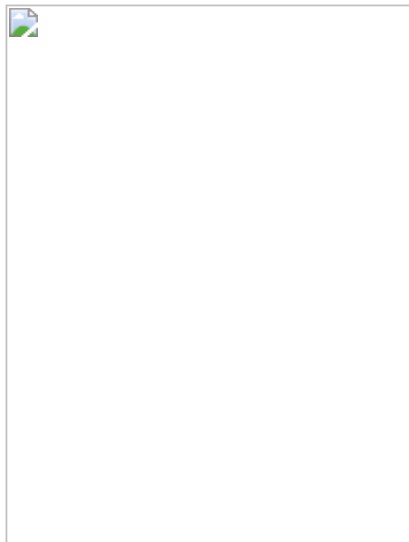
Frank holds a Bachelors of Science in Engineering Physics from Cornell University and a Masters in Electrophysics from George Washington University. He holds twenty-three U.S. patents relating to motion control, power conversion, microwave and linear amplifiers, semiconductor packaging, pulse modulators, power regulation and directional oil drilling.



Stuart A. Jones, Director of Engineering

Stuart Jones joined Comprehensive Power in 2000 and is responsible for the mechanical design, packaging and fabrication of our motor and drive products. His previous experience includes over ten years at Kaman Electromagnetics Corporation, where he was responsible for the design and development of high performance permanent magnet motors and drives. His experience ranges from industrial production to defense-funded R&D. In his position as Product Line Manager for Oilfield Products, Stuart was responsible for production and support of a 900 HP top-drive system used around the world for drilling oil and natural gas in remote locations.

Stuart received his Bachelors of Science Degree in Mechanical Engineering from Northeastern University in 1987. Between 1983 and 1987 Stuart had a co-op assignment in the MIT Magnet Laboratory working on superconducting magnets for medical imaging and scientific research.



Oilfield: Technology for Roughnecks

No environment is tougher on equipment than the oilfield. Comprehensive Power has been building and fielding equipment for the oilfield since our founding in 1998. Our TeraTorq[®] motors power National Oilwell Varco's IDS-350P top-drive, which has been designed specifically for land rigs, providing maximum capabilities in a package that fits smaller profile masts. The hollow shaft TeraTorq[®] motors produce over 1000 Hp and work with industry standard drive electronics or our more compact modular drives.

Our experience in the oilfield has led to the development of critical oilfield technology, including:

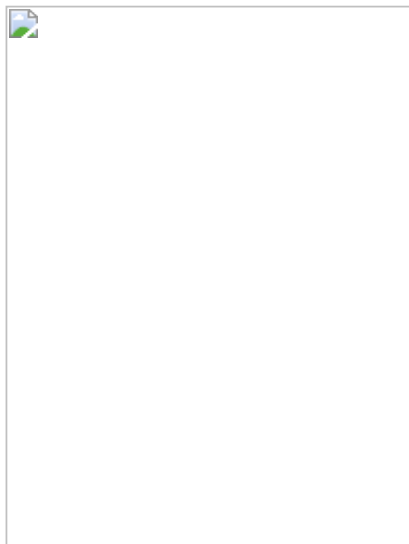
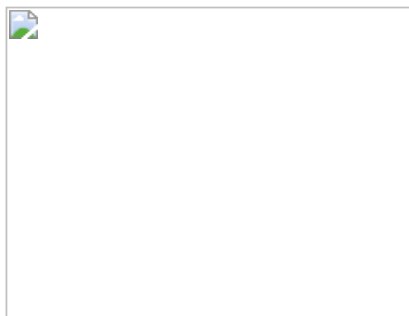
Patented directional drilling techniques that increase rates of penetration during long reach horizontal drilling.

Modular TeraTorq[®] drive electronics that can be safely reconfigured in the field without specialized equipment.

Hydraulic driven generator sets that produce stable DC power on rotating equipment without the need for slip rings.

Other Comprehensive Power Applications:

- [Alternative Energy](#)
- [Military](#)
- [Scientific](#)



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Permanent Magnet Motors

Using high-energy rare-earth magnets and our patented nested coil technology, Comprehensive Power is able to build permanent magnet (PM) motors which provide up to 5 times the torque and power of conventional motors of the same size and weight. We specialize in mid to low volume production of motors in the 1 to 1000 horsepower range. Let Comprehensive Power build a PM motor for your application. Some examples of our motors:

TeraTorq® family consists of four liquid cooled motors from 400 - 1,000 Hp designed for harsh environments and high axial shock loads.

8 Hp air-cooled PM motor with integral drive and networked DSP controls is used for cooling systems in mobile power applications.

Ultra-quiet low-speed high-torque servo motor generates over 1,000 foot pounds of torque and is used in submerged marine applications.

Other Comprehensive Power Products:

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