STANDARD MOTOR RATINGS (Ref Only)
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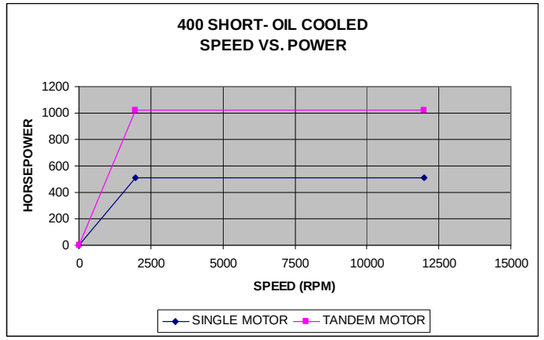
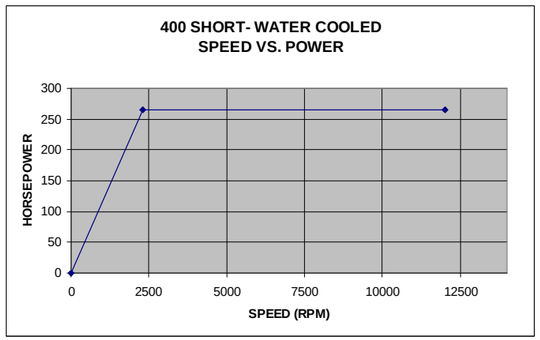
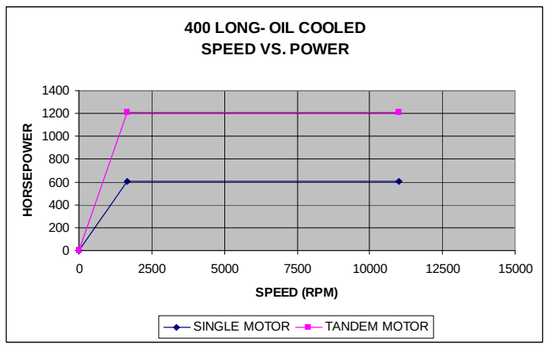
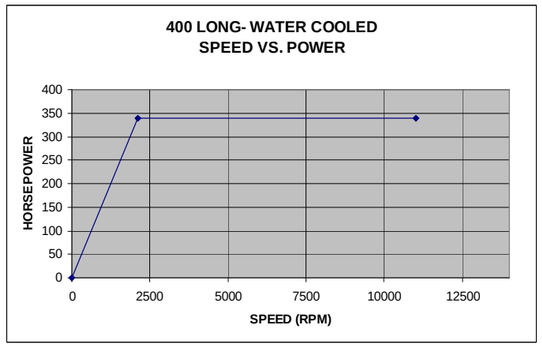
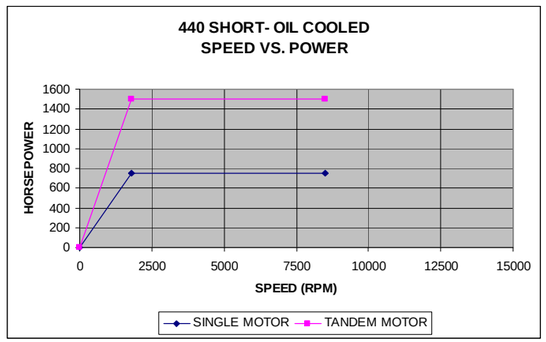
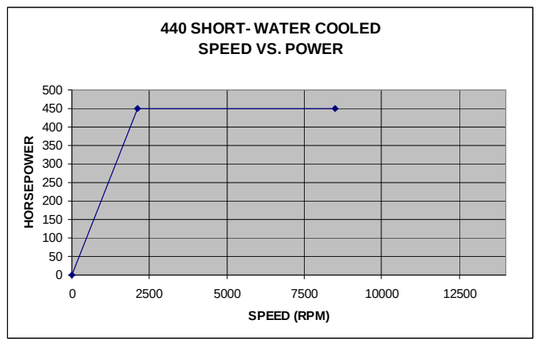


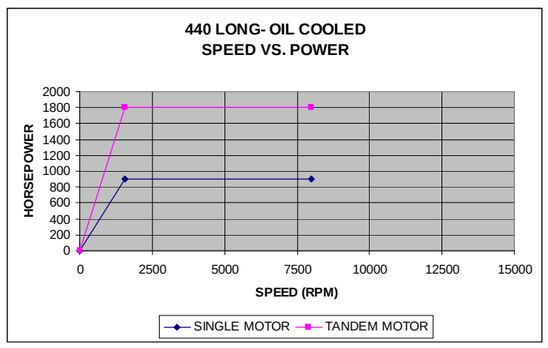


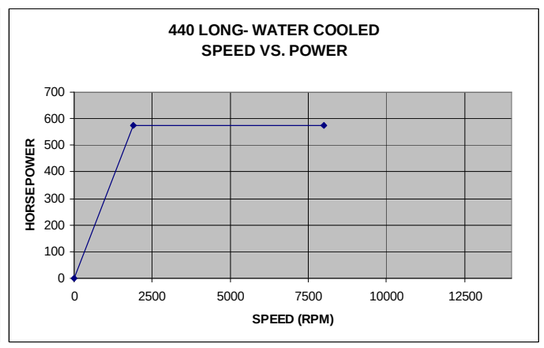




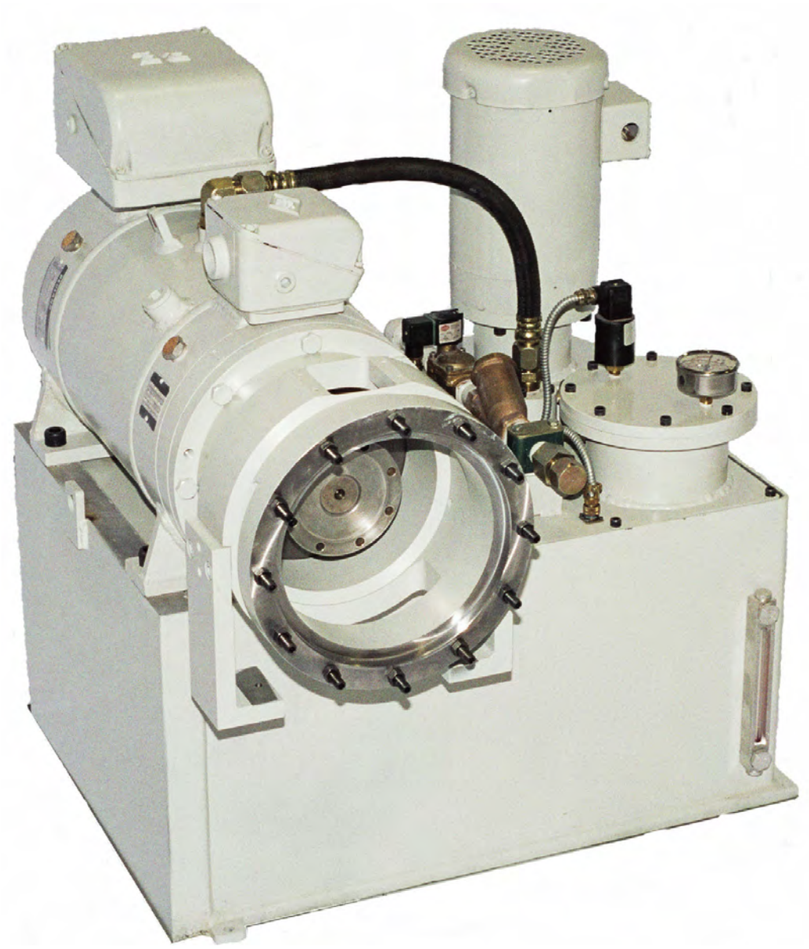








High Performance AC Motor Systems



BURGI ENGINEERS LLC
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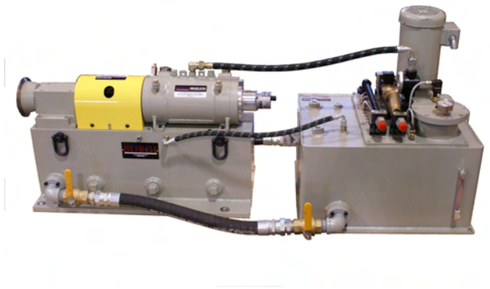
High performance AC motors

Reuland Electric Standard liquid Cooled Motor

787 Starter-Generator Test Stand Motor System



Helicopter Fan Fatigue Testing

Burgi Engineers and Reuland Electric are the choice when it comes to AC motor systems for your high performance rotating machinery needs. Our design, analysis and manufacturing capabilities allow us to create AC motor packages that exceed others in broad range torque, power and speed performance. We have a large selection of standard high performance motor ratings to choose from to meet your requirements. We also have the ability to provide custom designs to meet your specified power curve, speed performance and interface requirements.

Because we design and build these systems, we have complete knowledge of what goes into them. We know among other things, the materials being used, the fit between the rotor and shaft, the electrical design, the natural frequency of the rotor, bearing stiffness values, component stress levels and the heat transfer data for the various parts of the motor. This allows us to push our designs to their limits. Combine this with our years of field experience relative to rotating machinery integration and that gives you an extra advantage in your high performance equipment. Included in our offerings are cooling and lubrication systems, air oil lubrication systems, high speed couplings, motor bases, monitoring and control packages.

Thanks to modern variable speed motor drives or VFDs it is possible to design an electric motor to provide a specific torque to speed profile. Variable frequency supply allows for variable speed control. With proper control methods and utilizing power dense, low inertia motors, real world loads and load profiles can be generated. We work with many manufacturers of motor drives to provide systems with a broad range of performance.

Please call us to discuss your project needs.

Liquid cooled machinery delivers the following superior performance for demanding applications:

1. **High power and high speed**: Speed dictates the size of rotating machinery. Mechanical stresses are greater at high speeds which drives high speed machinery into smaller packages. If power and speed requirements are high, then enhanced liquid cooling can be used to increase heat transfer efficiency and allow higher power density.
2. **Low Inertia Requirements:** Designers specify low inertia when they want a responsive system. Low inertia dictates small rotor diameters for electric motors. For a given power rating, a smaller rotor will require enhanced heat transfer through liquid cooling.
3. **Size and Weight Restraints:** When the envelope for a machine is small, or weight constraints drive the machine size down, then a liquid cooled machine in a smaller frame size can be utilized.

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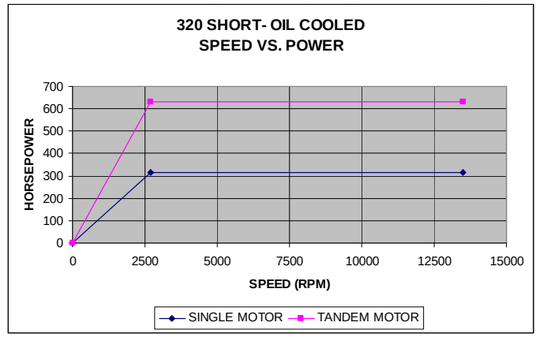

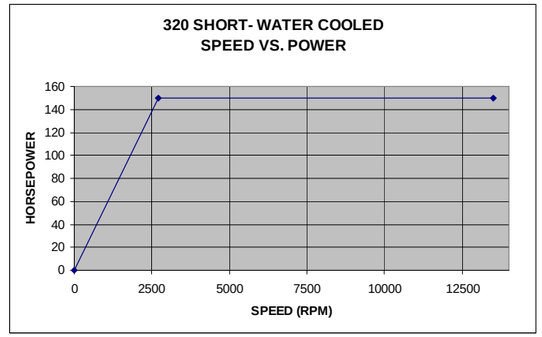

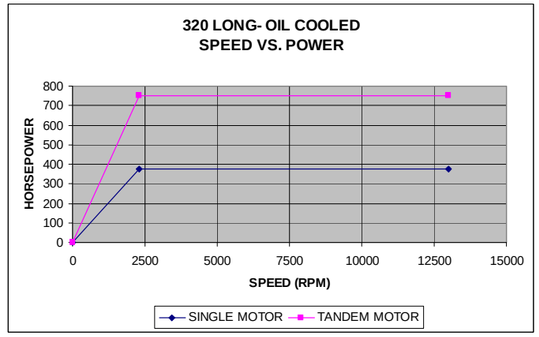

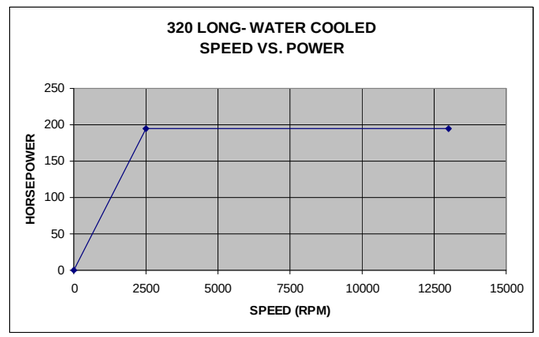

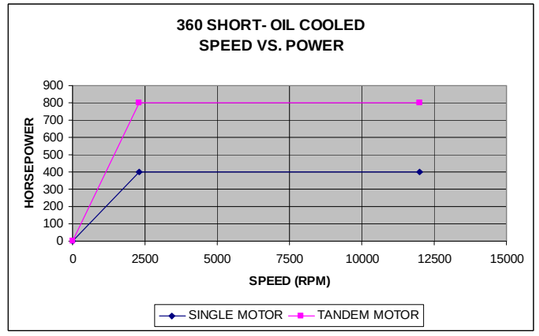

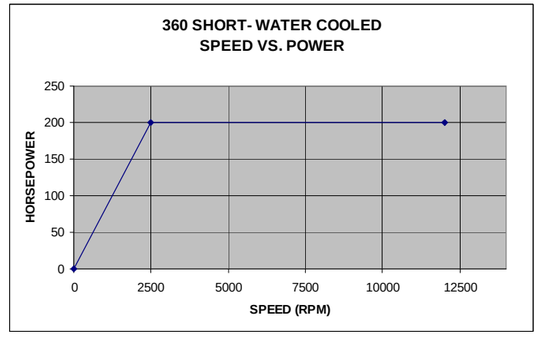

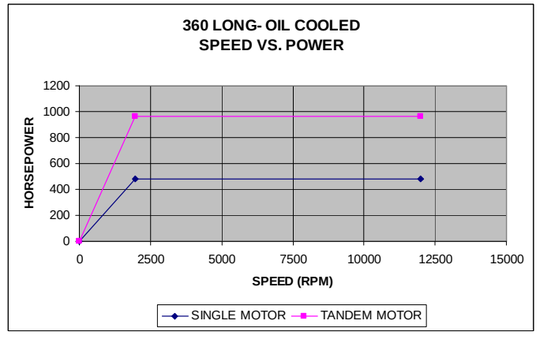

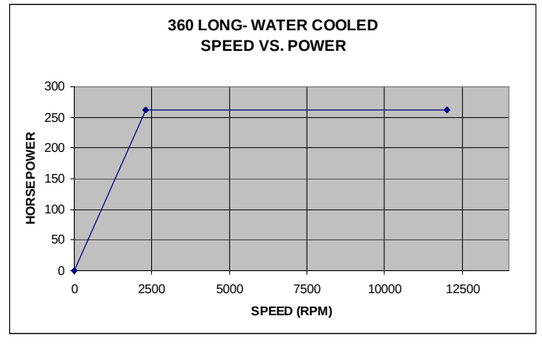

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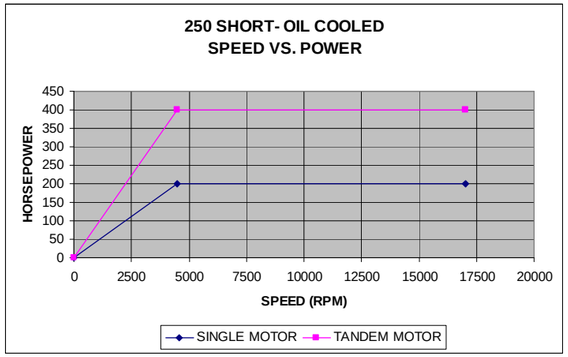
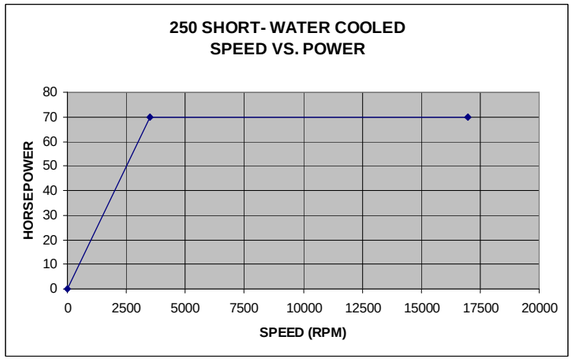
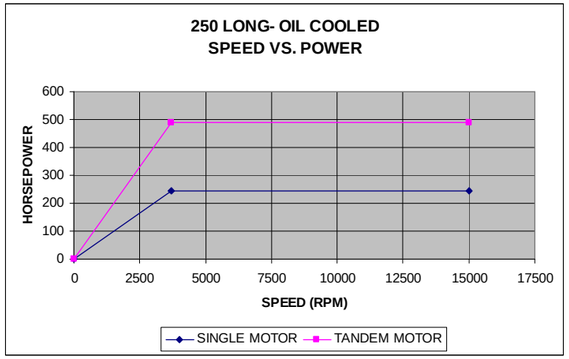
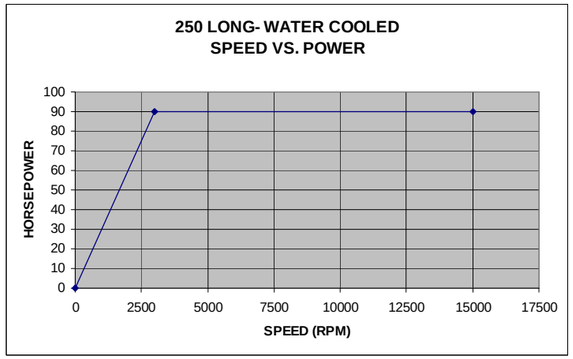
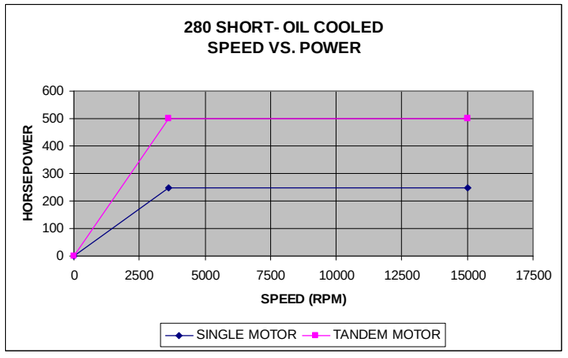
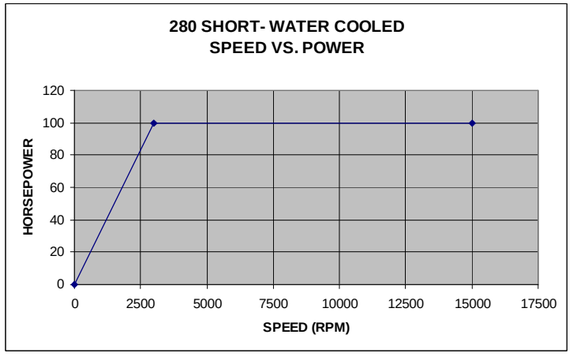


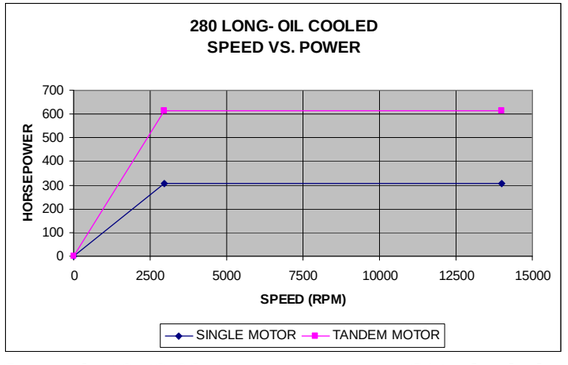


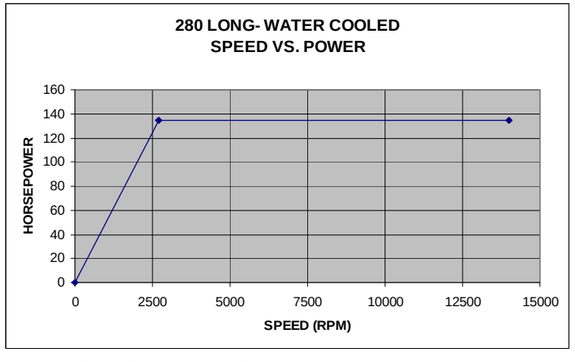




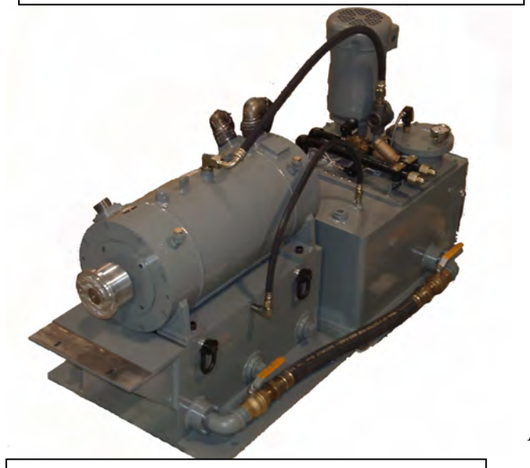








Low Inertia Torque Pulse Simulation Test Stand Motor System



High Power 16,000 rpm

Tilt and Roll Capable System

4. **Air Cooling Problems:** Liquid cooling provides an alternative to air cooling in confined areas, high contamination areas, or areas with high ambient temperatures. Mining, atomizer systems, injection molding applications, and machines housed in enclosed areas are candidates for liquid cooling.
5. **Low Noise Applications:** Liquid cooled machinery is much quieter. The cooling system can pump cooling fluid to the machine from a remote area, thus eliminating ambient noise pollution.
6. **Environmental Control:** Hot air exits the machine in a typical air cooled system and is allowed to exhaust into the surrounding area. This is particularly undesirable in confined areas where additional ventilation may be required. The waste heat can be dissipated with a liquid cooled system by pumping the hot cooling fluid to a designated external area.
7. **Precision Applications:** Process control standards are forcing facilities to control environmental temperatures. Liquid cooling provides superior temperature control to arrest thermal growth problems, control performance variations, and control ambient temperatures in sensitive processes.
8. **Reliability:** Liquid cooled motors provide more reliable operation. This is due to, better lubrication, a reduction in operating temperature and reduction of temperature gradients in the motor. Temperature gradients result in differential expansion of components. This make it difficult to hold tight tolerances in the machine construction and can result in high component stresses and increase wear rates.

We supply AC motor systems for numerous applications including:

High speed pumps
Atomizers
Test stands
Dynamometers
Machine tools
Blowers
Propulsion systems
Energy storage systems
High speed generators
Liquid cooled systems.
Centrifuges
Torque Pulse Simulation applications
Inertia simulation applications
Spin pits
Fatigue cycle testing

We work extensively with Reuland Electric Co. www. Reuland.com to supply power and speed ratings in a range from fractional at speeds to 60,000 rpm to high power ratings above 1,000hp and up to 15,000 rpm.

Reuland Electric also supplies custom and standard air cooled motors.

Control Systems

Burgi Engineers control systems monitor vital system operating parameters and offer local or remote verification of operating conditions. Our PLC based systems provide network monitoring capabilities. This allows centralized monitoring of your systems as well as remote trouble shooting and performance data gathering.

VFD Drives

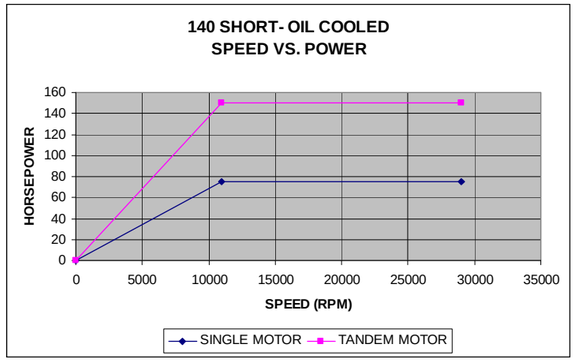
We integrated VFD drives into our packaged systems. We work with many drive manufactures and are familiar with many different drive applications.

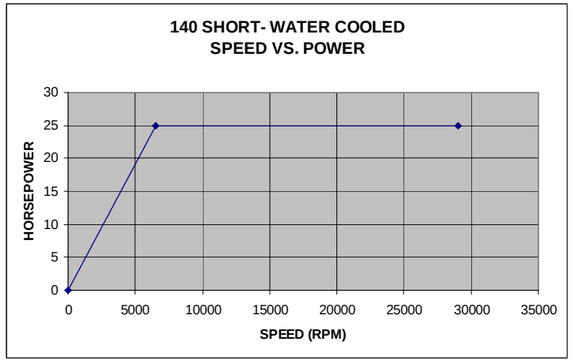
Couplings

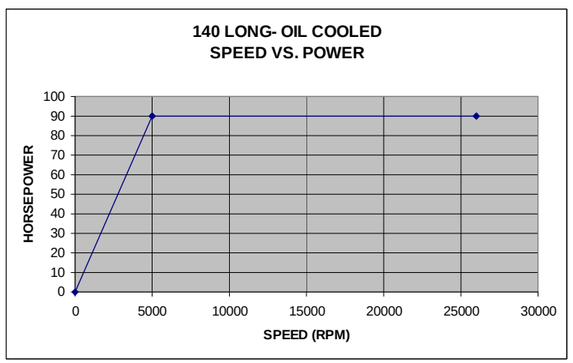
We design custom high speed couplings.

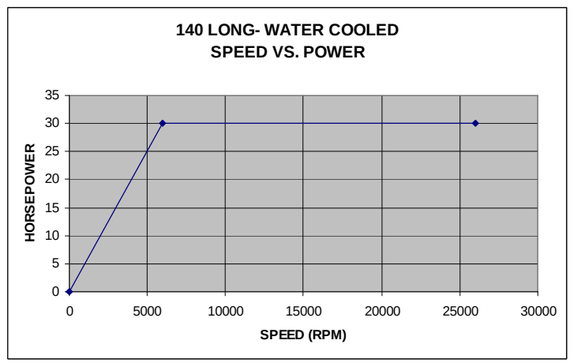
Engineering

Burgi Engineers LLC provides machine design, documentation, and manufacturing services for customers in the US and abroad. We offer professional design in the areas of custom AC motor systems, fluid handling systems, degassing systems for use in high speed rotating machines, process equipment and test stands. We utilize the latest in Computer Aided Design software, including Solid Works, AutoCAD, and Algor FEA. We routinely do dynamics, stress and heat transfer analysis. We utilize modern, high speed data transfer capabilities to communicate in a timely manner with customers. We sincerely want to be a part of your company's growth and possess the engineering savvy to help you accomplish your goals. Please contact us with your design requirements.









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