The Global Drive Systems business provides world class application expertise derived from over 100 years of industry experience. As a Global organization, we can work with your corporate engineering to develop solution standards for your worldwide facilities. Global Drive Systems delivers application-matched drive packaging, system upgrades and complete turnkey solutions through regional locations. Our worldwide network of Local Drive Solution Centers can help you be more competitive in the markets you serve.

Local Drive Solution Centers Provide:

**Consulting Services**
We provide engineering studies to increase machine speed for more production, or to improve machine tension control for improved product quality. Consulting Services may include investigation of the present machine operation, supporting calculations and evaluation of web transport and geometry components. Observations are documented with concise solutions and recommendations for your needs.

**Application and Design Engineering**
Engineers located worldwide provide innovative material transport, web handling and production management solutions. Design engineers have a wide skill and experience set ranging from drive, motion and machine control to automation and HMI systems across many industries.

**Manufacturing**
We offer both highly efficient central manufacturing and flexible, short lead time local manufacturing. Application-matched drive packaging through multiple section line-ups are manufactured in over 25 global facilities giving you an advantage over your competition with a shorter time to market.

**Installation Services**
Installation services range from electrical drawing packages through complete turnkey solutions. These installation services can reduce your project management load and provide a single source for coordination.

**Commissioning**
To ensure a smooth start-up our engineers will prepare a project plan, hold a pre-installation meeting, verify the installation, set-up the hardware, integrate the system and provide production coverage. Our experienced drive engineers will ensure that your project starts up on time and in budget.

Global Solutions, Locally Delivered

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Scalable Global Drive Systems

Application-Matched Drive Packaging
Regional manufacturing locations provide drive packaging for the toughest applications. From high density drive packaging to special enclosures such as NEMA 4X and explosion proof through higher volume and pre-engineered OEM packages; Local Drive Solutions has the flexibility and responsiveness to keep you competitive.

System Upgrades
Rockwell Automation has the industry’s strongest commitment to protecting your automation investment. This is demonstrated through our development of products and solutions that allow your system to benefit from the latest technology while reusing much of the existing hardware.

Complete Drive System Solutions
Industry and application experts have developed innovative solutions and standards designed to increase your productivity. These include software standards for web handling applications, integrated motion and drive control solutions, high performance electronic lineshaft solutions and fully integrated drive control, automation and HMI solutions.
Rockwell Automation, a leading manufacturer of industrial AC drives, has been providing high performance test stand solutions for over 90 years. Industry innovations include the first electronic inertia simulation solution and the first single platform drive, control and HMI system for test stand applications.

Turn to us for application solutions ranging from aircraft and drive train testing to automotive component testing. To meet the most demanding test stand requirements, our high-speed, high-response drive systems are performance matched with motors, software, and application engineering.

**Broad Product Portfolio**

Rockwell Automation has a broad range of motor, drive, controller, HMI and software products. From air and water-cooled drives to motors and high performance controllers, our globally supportable products have the functionality and performance breadth required for test stand applications.

**Integrated Architecture Solutions**

Rockwell Automation's Integrated Architecture offers a single controller and programming platform for all sequential, motion and drive control applications. RSLogix® 5000 provides a single programming environment for the Allen-Bradley® ControlLogix®, DriveLogix®, FlexLogix™ and SoftLogix™ PC-based controllers. In addition, our inter-operable solutions allow you to share your database with RSView® 32™, auto-tune PID loops with RSTune® and trend application parameters with RSTrend®. These integrated solutions offer increased flexibility in test stand applications.

**Open and Flexible Logix Architecture**

Whether you need a high-performance control system or a small, value-based control system, Logix platforms provide the right control system for your applications. Along with NetLinx open networks, Kinetix® integrated motion and ViewAnyWhere™ visualization products, Logix platforms provide the maximum in control integration, program re-use, communication flexibility, and overall ease-of-use so you'll spend less on setup, operation, and maintenance.

**Backward Compatibility**

Rockwell Automation is committed to supporting our customers drive investment through a built in backward compatibility using flash upgrade technology in place of custom EPROM's.

**Support Capabilities**

With 620 offices in over 80 countries, Rockwell Automation has unparalleled worldwide support.
Power Matched Motors and Drives
Rockwell Automation manufactures both motors and drives for the test stand industry. Our experience in these applications ensures a power matched motor and drive solution.

Field Oriented Vector Control
Field Oriented Control has been developed over a 10 year period and has 9 patents on the basic technology. Field Oriented Control is differentiated from traditional vector control in its ability to separate and independently regulate the motor flux and torque. This technology uses high bandwidth current regulators in combination with an adaptive controller, to separate and control the motor flux and torque.

Open Drive Communications
Rockwell Automation’s AC drives support open communication with ControlNet™, Ethernet/IP and Profibus adapters.

High Performance Communication Link
Synchlink™ is a high performance, synchronization and drive-to-drive fiber optic data link providing processor synchronization for multiple devices within 1 µSec. This supports high performance motor-to-motor synchronization.
for transmission, chassis and axle test stands. This link offers 50 µSec maximum drive and application transfer rates between the controller and drive for high performance test stand HMI packages.

**Drive Monitoring and Troubleshooting Software**

DriveTools SP has an intuitive user interface with integrated HTML Help™ architecture providing application help, parameter help, and fault help. Its optimized communication allows for simultaneous use of DriveExecutive and DriveObserver. DriveExecutive is an easy online and offline drive programming package with Windows® Explorer-style navigation and helpful dialogs and wizards. DriveObserver is an online, real time drive data collection and display package with available offline data viewing and convenient data display options. Rockwell Automation has the industries strongest drive programming and troubleshooting tools.

**Spindle Orient Feature**

The PowerFlex 700S AC drive Spindle Orient feature simplifies machine setup by accurately aligning the motor shaft to a preset position.

**Torque Estimator**

Rockwell Automation has developed a Torque Estimator feature in the PowerFlex® AC drive which eliminates the need for torque measuring devices. The Torque Estimator coupled with our unique temperature compensation motor model provides accurate torque estimation over a wide speed range independent of motor temperature. The temperature compensation model does not require a motor mounted feedback device.

The Torque Estimator is calibrated with a simple one step procedure at zero speed with a known torque applied to the motor shaft. This procedure eliminates the requirement of motor calibration while at speed.
Engine Test Stands
Rockwell Automation has a compact, regenerative AC drive solution meeting IEEE519 for engine test stand applications. In addition, our AC drive has embedded inertia simulation capability.

Transmission Test Stands
Common bus AC drive solutions are available for front wheel, rear wheel and transfer case transmission test stand applications. A power matched drive and motor package ensures optimum performance and a Torque Estimator function provides open loop torque control eliminating the requirement for torque transducers.

Chassis Dynamometers
Two and four wheel drive chassis dynamometer solutions are available with load sharing for adjustable front and rear wheel torque split. The programmable Driver’s Aid with grade control feature allows custom test profiles for vehicle emissions and performance.

Other Test Stands
Rockwell Automation has experience in many types of test stands including
- Component
- Aircraft
- Electric vehicle
- Car crash
- Hydraulic motor
Global Solutions, Locally Delivered.

- Over 100 years of experience as an electrical drives provider
- More than 50 years of organization systems application experience
- Represented in more than 80 countries
- 620 sales and support offices
- Nearly 5,600 distributors and agents worldwide

For more information check our Web site at www.rockwellautomation.com/gds