



EMERSON
Industrial Automation

Control Techniques

A world leader in motor control and power conversion technology

Company profile



**CONTROL
TECHNIQUES**

www.controltechniques.com



ABOUT CONTROL TECHNIQUES

Control Techniques - a world leader in motor control and power conversion technology

As part of Emerson, Control Techniques is a leading manufacturer of motor control and power conversion technology for commercial and industrial applications. Our innovative products are used in the most demanding applications requiring performance, reliability and energy efficiency.

Business without borders

Control Techniques is a global player, with manufacturing and E&D (Engineering and Design) facilities in Europe, USA and Asia. Our 93 subsidiary Drive Centres and resellers in 70 countries offer customers local technical sales, service and design expertise; many also offer a comprehensive system design and build service.



Our expertise is in your industry

Our experience and expertise in a broad range of applications, allows us to work with you to maximize the performance of your machinery and processes. We can deliver the advantage that you need to stay ahead in today's competitive environment.

Driving your bottom line

Control Techniques products are all about your bottom line. We integrate the best available drive technology to enhance your existing application and redefine the possibilities for your new investments; we add value to your operation.

Market research suggests our customers choose Control Techniques because they have confidence in our ability to provide solutions where product performance and quality support are most highly valued.



Emerson is where technology and engineering come together to create solutions for the benefit of our customers, driven without compromise for a world in action

Emerson Brand Promise

ABOUT EMERSON

Emerson - a legacy of performance



Emerson is a diversified global manufacturing and technology company. We offer a wide range of products and services in the industrial, commercial and consumer markets through our Process Management, Industrial Automation, Network Power, Climate Technologies, and Commercial & Residential Solutions businesses. Recognized widely for our engineering capabilities and management excellence, Emerson has approximately 133,000 employees and 235 manufacturing locations worldwide.

Revenues: \$24 billion (Fiscal 2011)

Business segments

Few companies can rival Emerson's steady rise during the last half century to rank among the most innovative and successful industrial enterprises, widely known for our management process, sustained financial performance and operational excellence.

Company earnings are reported in five business segments:

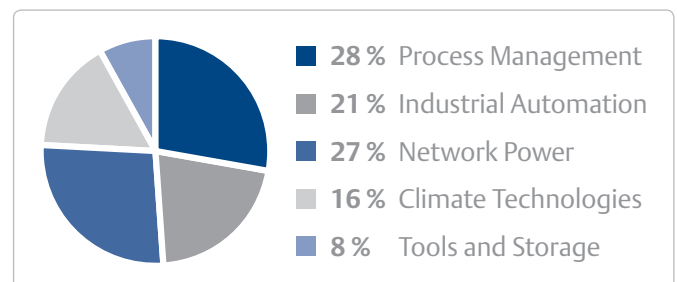
- Process Management
- Industrial Automation
- Commercial & Residential Solutions (formerly Tools and Storage)
- Climate Technologies
- Network Power

Emerson holds prime global market positions in each core business. While we drive our achievements with a multitude of sophisticated processes, operations and skills, our fundamental approach follows this simple proposition:

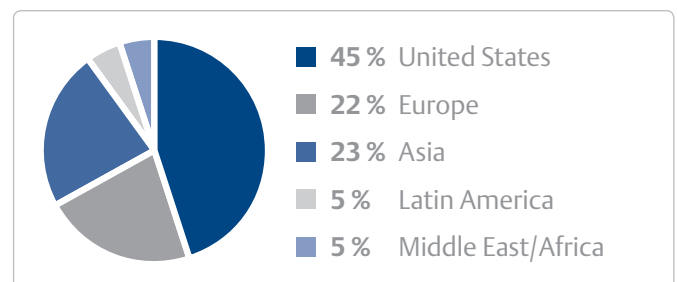
Emerson combines the best technology and the world's greatest human talent to create solutions for the benefit of our customers and the world.

We succeed by thoughtfully applying this principle to help our customers grow, to improve quality of life and to meet important business and social challenges.

Sales by business segment (2011)



Sales by geography (2011)



Innovative machines that deliver quality, speed, reliability and energy efficiency

High performance motor control | Onboard motion and PLC control
Flexible system integration | high speed drive-to-drive networking

CONTROL TECHNIQUES - TECHNOLOGY AND INNOVATION



Control Techniques' E&D facility in the UK

Drive system engineering

Many Control Techniques Drive Centres offer a comprehensive drive system design, build and commissioning service. This allows you to take maximum advantage of our expertise and experience in drive based automation.

Let's talk global

Control Techniques drives support all major Fieldbus systems to allow you to interface directly with PCs and PLCs in your system. Ethernet and Internet technologies mean that you can access your drives globally reducing your costs and allowing you to give unrivalled service to remote applications.

Always adding value

Control Techniques' worldwide E&D facilities are dedicated solely to design and innovation in drives. Whether driving a fan, moving a conveyor or controlling a printing press; Control Techniques drives allow your machines to do more.

Reliability designed into every Control Techniques product

Our drives are developed using the very latest technologies and engineering tools. We thoroughly check the integrity of every aspect of the design to ensure our drives have a long and productive life. Our modern design cycle brings the best drive technologies to the market quickly allowing us to offer you the best motor performance available.

Intelligent systems

In-built intelligence means your drive can be uniquely customized to control your application. This allows you to standardize on technology and yet retain the flexibility to integrate closely with the mechanical system and other control elements that form your machine.

Emerson motor and drive solutions

Control Techniques drives and Leroy-Somer motors offer a total Emerson solution. Both companies offer quality and technology leadership to deliver the best possible combination of motors and drives. High efficiency motors combined with variable speed control offers a matched energy optimized solution.



Leroy-Somer's DYNEO®

Leroy-Somer's DYNEO® permanent magnet solutions are at the cutting edge of variable speed technologies, bringing together all Leroy-Somer's permanent magnet solutions for drives and synchronous motors. These provide compact and low weight motor designs, with significantly higher efficiencies.

Maximise energy delivered to the grid
for large scale photovoltaic power plants

High efficiency | Modular, fault tolerant system
Early Switch on, late switch off | Emerson Bankability

CONTROL TECHNIQUES - POWER CONVERSION

Helping you to power your plant sustainably

Control Techniques inverters are up to 98.1 % efficient and reduce energy consumption to protect the environment. The materials used within our drives are up to 85 % recyclable. All products launched since 2007 are RoHS compliant (free of lead and other hazardous materials).

Renewable energy solutions

Control Techniques are technology and service leaders for high efficiency power conversion and control solutions for renewable energy schemes. These include solar photovoltaic (PV), wind, tidal, wave and hydro based power generation. Our systems are backed by manufacturing and engineering centres globally employing over 1700 staff. Our unique inverter technology utilises cost effective, mass-produced modules that are proven to give market leading reliability and efficiency.



Emerson SPV systems

Emerson SPV systems, engineered by Control Techniques, offer a range of transformerless central inverters for PV installations from 145 kVA to 1,590 kVA.

Each inverter is constructed using multiple standard 145 kVA or 175 kVA modules. Based on a stable design, our inverter modules are mass produced for both industrial and PV applications.

Energy yield - The key to a better return on investment

Energy yield is about more than just efficiency, it is also about availability. Emerson PV inverter solutions enable investors to exceed their investment performance expectations through high yield inverter systems. These are designed and manufactured by our professional engineers and controlled through our dedicated project management teams, to meet your required timescales. Our SPV inverter systems are backed by guarantees to ensure performance is maintained over the lifetime of the plant.



Emerson
SPV series inverter

CONTROL TECHNIQUES DRIVES

Always a step ahead

Many of the drive technologies that are common today were first developed into high volume commercial products by Control Techniques, such as the first digital DC drive and the first AC closed loop vector drive. We continue to be an innovator delivering a drives range that technologically excels.

Mentor MP

25 A to 7400 A
400 V / 575 V / 690 V
Two or four quadrant operation
High performance DC drive

Unidrive SP Modular

45 kW – 1.9 MW
200 V / 400 V / 575 V / 690 V
High power modular
AC drive

Commander SK

0.25 kW – 132 kW (0.33 hp - 200 hp)
100 V / 200 V / 400 V / 575 V / 690 V
General purpose AC drive

Unidrive SP Panel Mounting

0.37 kW – 132 kW
200 V / 400 V / 575 V / 690 V
High performance AC
and servo drive



Unimotor hd

0.72 Nm to 16 Nm (48 Nm peak)
High dynamic AC brushless
servo motor



○ **Unidrive SP Free Standing**

90 kW – 675 kW
400 V | 575 V | 690 V
Higher power performance AC drive

○ **Digitax ST**

0.72 Nm to 19.3 Nm (57.7 Nm Peak)
200 V | 400 V
Intelligent, compact and dynamic servo drive range

○ **Affinity**

1.1 kW to 132 kW (1.5 hp to 200 hp)
200 V | 400 V | 575 V | 690 V
IP20 (NEMA 1) and IP54 (NEMA 12)
Dedicated HVAC/R drive for building automation and refrigeration

○ **Unimotor fm**

0.72 Nm to 136 Nm
(408 Nm peak)
Performance AC brushless servo motor

○ **Solutions Modules**

Control Techniques Solutions Modules are common across our drive families, providing the ultimate flexibility to customize the drive features to meet the needs of your application.

Intelligence: Programmable automation and motion Solutions Modules.

Communications: Ethernet and Fieldbus Solutions Modules.

Feedback: Encoder and Resolver Solutions Modules.

Inputs and Outputs: Additional analog and digital input and output Solutions Modules.

DRIVING THE WORLD...

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