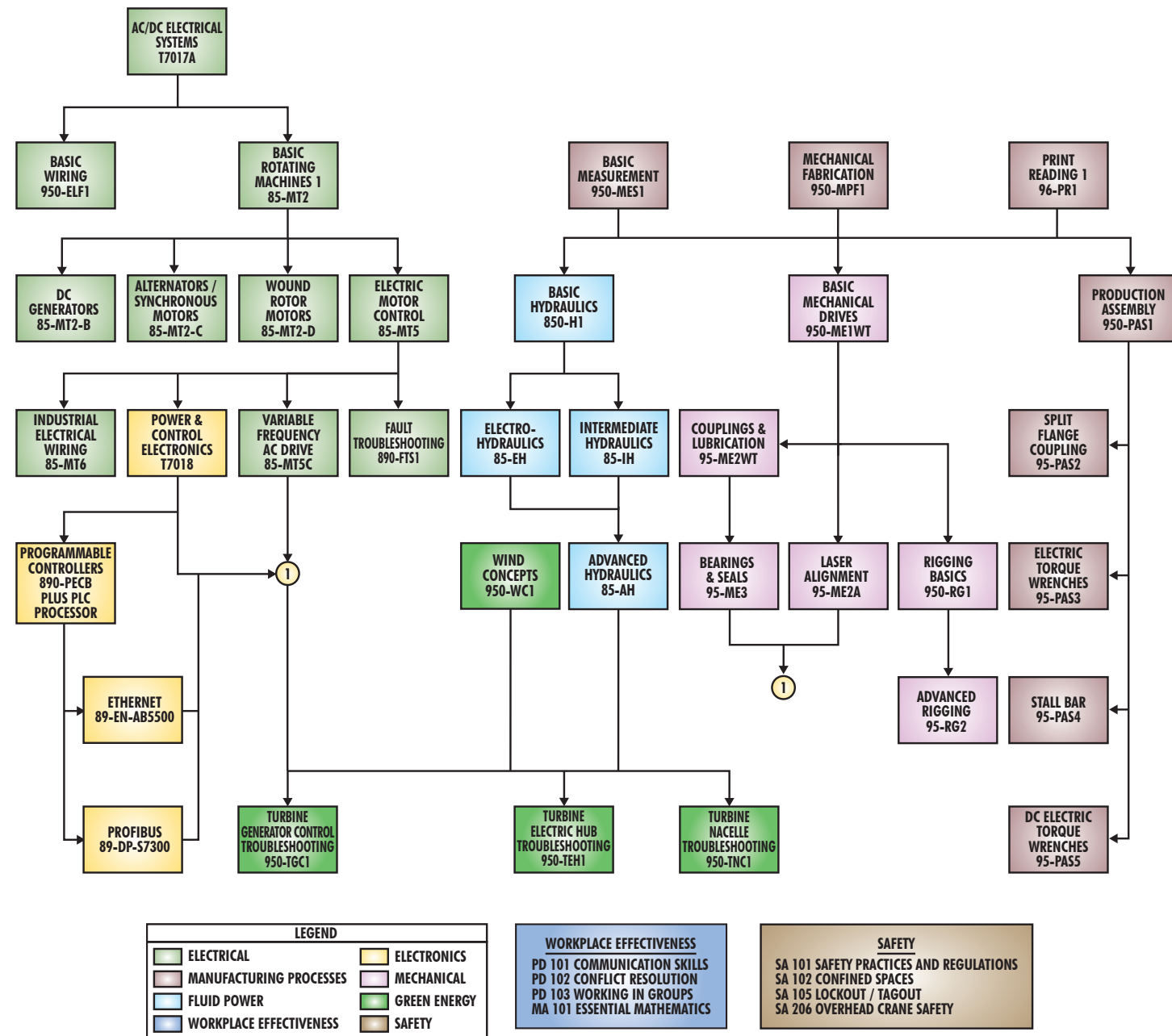
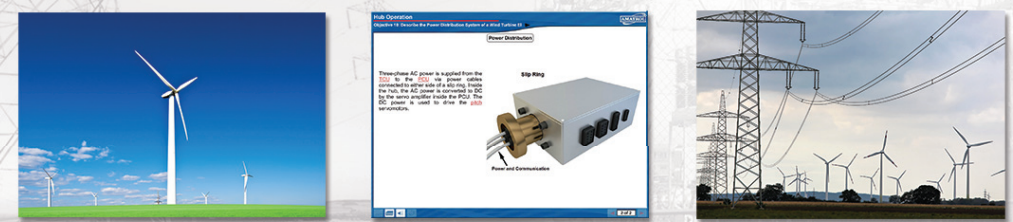


Utility Scale Wind Turbine Learning Systems

UTILITY SCALE WIND TURBINE TECHNOLOGY



2400 Centennial Blvd. • Jeffersonville, Indiana 47130 U. S. A.
 Phone: 812.288.8285 • Fax: 812.283.1584 • Toll Free in USA & Canada: 800.264.8285
 Email: contact@amatrol.com • www.amatrol.com



UTILITY SCALE WIND TURBINE LEARNING SYSTEMS



Nacelle ▶ 950-TNC1

- Nacelle Components & Operation
- Turbine Safety
- Turbine Control Functions, Software, Power
- Turbine Control Unit
- Turbine Hydraulics
- Yaw Brakes
- Parking Brakes
- Rotor Lock
- Yaw Drive
- Twist Box
- Meteorological Instrumentation
- Yaw System Operation
- Safety Loop Operation
- System Communications
- System Troubleshooting



Generator Control ▶ 950-TGC1

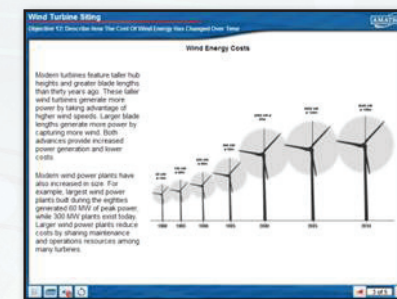
- Generation System Operation
- Commissioning Tests
- Troubleshooting
- Grid Power Interface
- Fiber Optic Communications
- Generator Control Software
- Revenue Meters
- Shunt Trip Circuit Breakers
- Line Contactors
- 3-Phase Inverters
- Power Distribution Panel
- Pad Mounted Transformers
- Rectifiers
- Computer Control Units
- Temperature Control



Available for North America Only

Electric Hub ▶ 950-TEH1

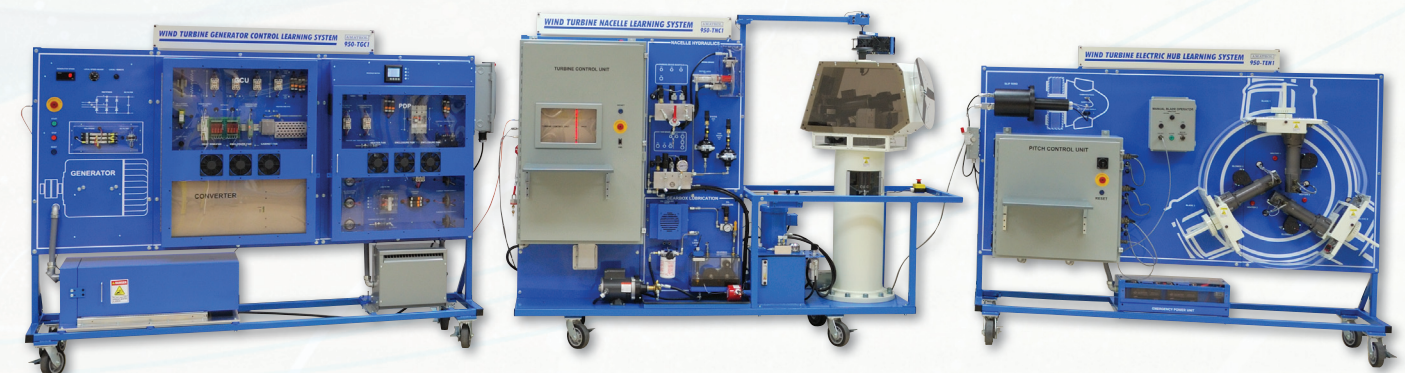
- Hub Functions
- Hub Safety
- Pitch Control Software
- Hub Power
- Servo Pitch Operation
- Servo Reference Position Adjustment
- Sensor Operation
- Emergency Feather Operation
- Battery Operation & Capacity
- Battery Types & Banks
- Battery Charging
- Emergency Feather Control
- Power Voltage Verification
- Hub Fault Messages
- Individual Blade Troubleshooting
- System Troubleshooting
- Battery Maintenance



Wind Concepts ▶ 950-WC1

- Introduction to Wind Power Systems
- Wind Turbine Production
- Wind Turbine Siting
- Wind Power Industry
- Aerodynamics
- Power Ratings
- Wind Resources
- Wind Plan Siting and Economics

Amatrol's history of innovation is evident in our three utility-scale wind trainers, which can be utilized as independent learning systems or can be combined to simulate a scaled-down wind turbine environment. The Nacelle, Electric Hub, and Generator Control can be connected via fiber optic communications and can be controlled using the 950-TGC1's software, so students can bring the turbine online with the grid.



SMALL WIND TECHNOLOGY SYSTEMS ALSO AVAILABLE