

# Process Turnkey Solutions

## Challenges

Manufacturing process systems are more than just pipes, pumps, tanks and valves. It is the heart of operation providing recipe management, batch control, and uncompromising product quality.

Today's market demands flexibility for consumer-driven products with high yield, sustainable OEE, ease of operation, expanded and updated batch capabilities. Smart control systems, data visibility and the ability to respond quickly are the keys to maintaining your competitive positioning in the industry.

## Solutions

With almost 40 years of experience, Polytron will support upgrading your plant's process control systems. The engagement starts with creation of a Definition Design Plan (DDP) to help identify all necessary changes and determine technology vendor requirements, including:

- ▶ Long-term availability of hardware and software to ensure long-term support, increasing the flexibility and stability of overall production performance
- ▶ Initial cost and support cost impacting the overall return on investment over the life of the system
- ▶ Availability of qualified engineers to support the process control system to dramatically ease the demands of maintenance, repair, and future flexibility needs

## Capabilities

Polytron provides a single point of contact for your projects with a comprehensive solution offering including:

- ▶ Collaboration with your team to create the Functional Design Specification
- ▶ Development of the electrical / controls and mechanical design based upon the Functional Design Specification
- ▶ Machine/System Integration and Programming
- ▶ OEM procurement and management
- ▶ Supply of electrical and mechanical hardware and installation
- ▶ Onsite support for construction management, debug and system validation
- ▶ Documentation and training for performance continuity



## Process Electrical Engineering

- ▶ ISA88 Batch Process Control
- ▶ Continuous Batch Process Control
- ▶ Batch Processing and Recipe Management
- ▶ Dry/Liquid Ingredient Storage, Blending, and Mixing
- ▶ Advanced Process Control - Internal Model Control / Coordinated Control / Modular Multivariable Controls
- ▶ Rockwell Automation PlantPAx (Distributed Control System migration)
- ▶ SCADA/PAC/HMI Programming
- ▶ Instrumentation - Specifications, Selection and Supply
- ▶ Electrical Design and Installation Packages
- ▶ Power System Single Lines - Design and Development
- ▶ Industrial Network Upgrades / Security
- ▶ Control System Emulation and FAT
- ▶ MI/MES - Data Visibility from ingredient receiving through packaging, including company-wide performance, recipe management and integration with ERP system
- ▶ Track and Trace, Quality Analysis, Compliance Reporting
- ▶ Downtime Tracking, KPI Dashboards
- ▶ Machine Safety Risk Assessments and Mitigation

## Process Mechanical Engineering

- ▶ Process Flow Diagrams (PFD) Design and Development
- ▶ Piping & Instrumentation Diagram (P&ID) Design and Development
- ▶ Configuration of New and Existing Manufacturing Lines
- ▶ Facility Consolidation for Production Efficiency
- ▶ Construction Management and Procurement
- ▶ Process General Arrangements: Tank Farms, Pumps, Skids. etc.
- ▶ Process Equipment Specification and Selection
- ▶ Process Calculations and Mass Balance
- ▶ Mechanical Design and Installation Packages
- ▶ Piping Design and Installation Packages
- ▶ Isometric Piping Diagrams

### Contact Us

Using our expert knowledge in best-practices and standards we ensure the highest degree of project success in all areas of the project.

Are you ready to take the next steps toward process control system solutions? **Contact us.**

