

# Improving Chemical Manufacturing Safety and Reliability

Keep your chemical plant equipment running reliably and safely.

## Challenges

### Disruptive Maintenance Measures

Though critical for valve maintenance, the problem with exercising the solenoid valve is that it may introduce some costly downtime into your operation. To avoid this issue, plant owners need reliable, redundant systems that enable them to test each solenoid individually without ever taking the system offline.

**AVOID  
MAINTENANCE  
DOWNTIME.**



### Meeting Functional Safety

Plant owners must implement functional safety systems, reducing the level of risk in a device or system by identifying potentially hazardous conditions and enabling corrective actions to avoid or reduce the impact of an accident. These safety solutions depend on active, automatic safety technology to respond to potentially dangerous situations.

**COMPLY  
WITH SAFETY  
STANDARDS.**



### Ensuring Vital Processes Always Operate

To keep uptime high, plant owners need to deploy high-availability control systems with flexible communication capabilities. These control solutions should include redundancy features that ensure critical processes continue to operate — even in the event of a system failure.

**KEEP  
UPTIME  
HIGH.**



# OUR SOLUTIONS: Promote plant uptime, reliability and safety.

From redundant control systems to rugged proximity sensors, our proven technologies are designed to maximize the reliability of your chemical plant — all while keeping personnel and equipment safe.

## Keep Uptime High While Meeting Functional Safety Requirements

Our pre-packaged pilot valve systems, the Advanced Redundant Control System (ARCS) and Redundant Control System (RCS), enable you to perform critical valve tests without taking your system offline. They have no single point of failure, incorporate redundant configurations (1oo2, 2oo2 and 2oo3) and consolidate many components — including pressure switches and redundant solenoid valves — into one easy-to-configure package that meets functional safety requirements.



## Enhance Worker Safety in Hazardous or Inaccessible Areas

One easy way to improve safety in chemical applications is to deploy smart, wireless devices to monitor equipment in remote or hazardous environments — such as the safety showers and eyewash stations. The TopWorx™ Safety Shower and Eyewash Station Monitoring Kit takes advantage of TopWorx™ GO™ Switch technology to alert first responders to emergency situations — no matter how harsh the conditions or how remote the facility.



## Minimize downtime with high-availability controls.

These control solutions minimize unplanned downtime for mission-critical systems while leveraging the flexibility of PROFINET. For example, PACSystems™ RX3i controllers include hot standby CPU redundancy — a configuration that includes an active and backup CPU — allowing critical processes to continue operating should a failure occur.



### ASCO™ Redundant Control System (RCS)



### ASCO™ Advanced Redundant Control System (ARCS)



### TopWorx™ Safety Shower and Eyewash Station Monitoring Kits



### PACSystems™ RX3i Controllers



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