



Operational technology
and control systems
to **transform** the
mining value chain



At Mipac we go *beyond the solution*

From control systems with robust technology and engineering foundations to the latest innovative advancements in digital technology, Mipac delivers high-quality, intelligent solutions that drive performance.

We understand the complex challenges operations face through our depth of on-site experience and have developed a reputation for solving complex problems.

Operating globally, we provide an extensive range of services to realise the total value of your mining operation and have developed a suite of products that will help you increase productivity, reduce costs and optimise operational performance.

Transforming mining operations with solid automation, engineering expertise, and cutting-edge digital technology – count on the Mipac team as your trusted advisors.



“First Quantum Minerals considers Mipac a key partner in our projects and operation optimisation history and future. Congrats on 25 years and look forward to continued collaboration and building “interesting” projects!”

Gavin Ashley, Regional Manager, Projects and Operations at First Quantum Minerals



27+ yrs
servicing the
mining industry

720+
projects
delivered

110+
site/plant
operations

55+
countries around
the world



Advanced Process Control

Advanced Process Control (APC) uses software logic to capitalise on the full value of modern process control. These techniques increase plant efficiency and make it easier to meet your variability reduction goals, helping you avoid the constant firefighting that wastes operations and maintenance hours.

- APC readiness
- APC design and implementation
- Advanced regulatory control (ARC)
- Artificial Intelligence (AI)/machine learning
- Multi-variable Model Predictive Control (MPC)



Industrial Automation

We design, commission, configure and optimise process control environments so that downtime and risk are minimised.

Our team of specialist control engineers are adept at implementing and commissioning robust, reliable systems and can support both large-scale continuous process operations and smaller individual challenges.

PLC, DCS, SCADA, Control Systems
Virtualisation
Industrial Networking and Cybersecurity

- Automation feasibility studies
- Communication and network design
- Configuration of field devices and network components
- Control system modernisation
- Training and e-learning
- Distributed control systems
- Edge control
- Factory and site acceptance testing
- Fieldbus design and configuration
- Human machine interfaces
- Industrial networking
- Integration and commissioning services
- Main Automation Contractor

Asset Performance Management

Predictive maintenance tools have become indispensable in modern asset management.

Leveraging advanced asset health management software, these tools continuously monitor equipment and infrastructure.

By analysing data patterns and anomalies, they predict potential failures before they occur.

If you are looking to unlock the full potential of your assets, our solutions engineers work with the latest software to provide a comprehensive solution for monitoring, diagnosis, and reliability management in mining process operations.

- Real-time asset health monitoring
- Asset reliability and performance
- Predictive maintenance
- Prescriptive maintenance
- Maintenance planning support tool



Global partners with



Data Visualisation and Analytics

We provide solutions that transform data into actionable information, enabling you to unlock your operation's total value.

From complete digital platforms to business intelligence, monitoring systems and beyond; our solutions deliver practical, continuous operational improvements that demonstrate a clear, long-term return on investment.

- Process historians
- Enterprise historians
- Predictive analytics
- Cloud solutions
- Business Intelligence (BI)

Process Optimisation

Our experienced and dedicated team has global experience in metallurgy and the mining value chain and can leverage the collective knowledge of Mipac's instrumentation, control system and production system engineers to help you achieve sustained, increased productivity, efficiency and reliability.

- Advanced reclaiming control
- Alarm audits
- Bottleneck optimisation
- Downtime monitors
- In-loading and out-loading optimisation
- Integrated asset modeling
- Metallurgical accounting
- Performance monitoring
- PID loop tuning
- Plant constraint control
- Process and infrastructure audits
- Process modeling
- Production optimisation
- Sequencing and process start ups

Cybersecurity

Since the start of the COVID-19 pandemic, cyberattacks have surged on operational technology systems, with more potential for huge impact on mining operations. Our OT cybersecurity experts support clients in securing and protecting their critical infrastructure.

- Application and cloud security
- Critical infrastructure security
- Internet of Things (IoT) security
- Industrial network design
- Cybersecurity audits and implementation
- Intrusion detection
- OT system administration
- System virtualisation



Electrical and Instrumentation

With an expert team of electrical and instrumentation engineers, our services range from initial design of solutions and infrastructure to the selection, design, implementation and support of E&I systems.

- Arc flash calculations
- Brownfield cut-overs
- CAD design drafting
- CCTV design
- Classroom and site-based training
- Customised control panels and MCC design and drafting
- Earthing design
- Electrical equipment integration into supervisory control systems (SCADA)
- Electrical systems design and investigations
- Ethernet radio-telemetry systems
- Fieldbus systems including Probus PA
- Functional safety design
- Hazard and operability study
- HAZOP/HAZOP
- Industrial network design
- Instrument design and calibration
- Lighting and small power design and drafting
- LV drive control design
- Motor protection design
- Performance testing/optimisation
- Power systems design for control and computer equipment
- Procurement, expediting and inspection
- Project documentation
- Safety and obsolescence audits
- Site acceptance testing and commissioning
- Switchboard design
- Troubleshooting and fault diagnosis

Operations Support

From entire process control systems to single components of a plant, Mipac's team are experts in commissioning, plant start-up and providing ongoing support.

**Commissioning plants | Ongoing 24/7 operational support
Remote support | On-site support**

- Alarm analysis, management and rationalisation
- Commissioning and return to service scheduling and coordination
- Development of operational procedures and practices
- Electrical safety audits for surface and underground plant and equipment
- Maintenance support for the lifetime of the plant
- Operational event analysis and problem resolution
- Operator training
- Optimisation of control systems on critical plant items
- Plant performance review, analysis and optimisation
- Project engineering, construction, supervision and commissioning of plant modifications
- Remote support
- Technical support and site visits

TCard MPA

TCard is specifically designed for 24/7 mining operations. Its easy-to-use interface meets the task management needs of operators, superintendents and plant managers.

Recurring tasks are automatically scheduled to suit mining-specific shifts, rosters and work patterns. These tasks are then dynamically adjusted based on equipment shutdowns thereby ensuring the right activities are undertaken.

- Switch away from paper
- Standardise operator activities
- Improve shift handovers
- Improve communication between teams
- Maintain good housekeeping

An industry-first in mining, MPA is a suite of apps designed to manage variability and enable more predictive insights into your mining operation.

Individually, these applications detect, alert, interact and manage events within your plant that are causing variations in plant output and performance. When united together they complement existing production critical systems to ensure every opportunity is maximised.

Apps Now Available

- Production Logsheets
- Production Reporting
- Digital TARP
- Alarm Management

Apps Coming Soon

- Golden State
- Asset/Process Health
- Production Monitor
- CAIMS

Mipac Software Products

Mipac Hardware Products

Copper Monitor

Copper Monitor provides continuous, online monitoring of copper concentration in electrolytic solutions, reducing the need for manual chemical analysis.

When integrated with operation-wide control systems, the monitor helps reduce operational costs, increase productivity and ultimately improve the quality of production.

ShortMeter™

Our ergonomically designed, lightweight, easy-to-use device enables quick detection of short circuits and dead plates in electrolytic tankhouse operations. This low-cost and low-maintenance device will help you increase productivity and improve production quality.

CellView®

Mipac's transformational wireless cell voltage monitoring system, CellView®, optimises mineral processing operations and detects short circuits early, assisting in the production of high-quality outputs while continuously and accurately monitoring the health of a cell.



Mining 4.0 Consulting

At Mipac, we combine extensive mining experience with the latest digital technologies to create intelligent solutions that maximize productivity across every step in the mining value chain. Our global team of experts diagnoses and designs high-quality automation systems to help reduce variability and drive operational excellence.

- Control philosophy development
- Digital architecture consulting
- Digital maturity assessments
- Digital transformation roadmaps
- ESG monitoring and reporting
- Industrial Internet of Things (IIOT)
- Change leadership
- Multi-variable Model Predictive Control (MPC)
- Advanced Process Control (APC)
- Advanced Regulatory Control (ARC)

With a world-leading reputation in process control and automation for the mining, minerals and metals industry, Mipac has a long history of solving operational problems, minimising risk and driving productivity.

We believe in working together with our clients and partners to achieve their goals.

At Mipac we go

beyond the solution

sales@mipac.global
Brisbane | Perth
Tucson | Vancouver

