



CPC Engineering General Catalog





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CPC Engineering

**CPC Products for
Control & Protection**

CPC AntiSurge Controller ASC



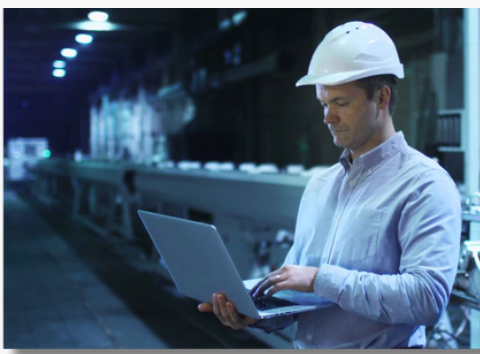
- **Functionality:** The Antisurge Control System (ASC) is essential for maintaining the compressor's minimum flow rate to prevent surge conditions. This is achieved by managing the operation of the Antisurge Valve.
- **Safety Features:** The system incorporates safety margins that are parameterised based on the surge flow rate specific to each application. This enhances the protection of the compressor and increases the efficiency of the process.

CPC Surge Detector SD

- **Surge Prevention:** This function primarily focuses on rapid process records and intervention or interrupt compressor surges by leveraging its dynamic actions.
- **Monitoring and Response:** Continuously monitors key compressor parameters affected by surges, alerts personnel at the first detection of surge, takes actions in the antisurge valve at the second, and shuts down the compressor after multiple surges to prevent damage.



CPC Process Controller PRC



- **Integration:** Seamlessly integrates the compressor with surrounding processes and control systems for improved control and efficiency.
- **Cooperation:** Works with the Antisurge Controller to enhance compressor and process protection.
- **Optimisation:** Adjusts key operational parameters like load, power, and pressures to boost performance and reliability.

CPC Controller Retrofit/Migration Solution

We offer a customized panel that integrates a PLC and an HMI. This system perfectly fits the original controller's space, ensuring a smooth and efficient transition.

CPC has developed an intelligent Solution to replace obsolete controllers' Hardware and Software, focusing on "Complete 1-to-1 Functionality Migration" and "Full Integration with Existing Infrastructure".

CPC Compact Solution

- Significant reduction of over 50% in migration time and costs.
- Minimizes project execution, commissioning, and startup hours.
- Technological upgrade with new features:
- Touch HMI with intuitive process visualization.
- Adaptable communications with any high-level system.
- Access from remote engineering stations.
- Integration with OPC and potential embedded OPC.
- Adaptability to new plant safety requirements.

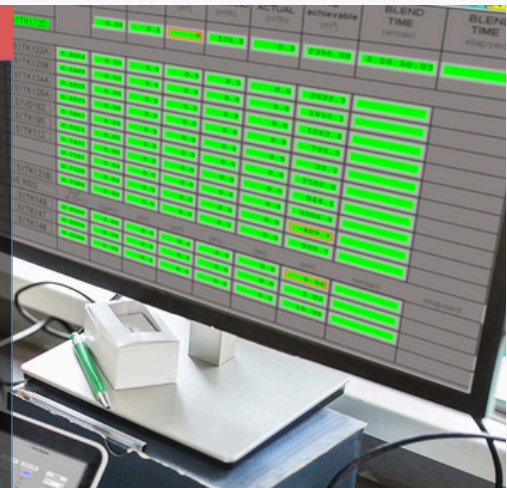


CPC RMP Monitoring Package

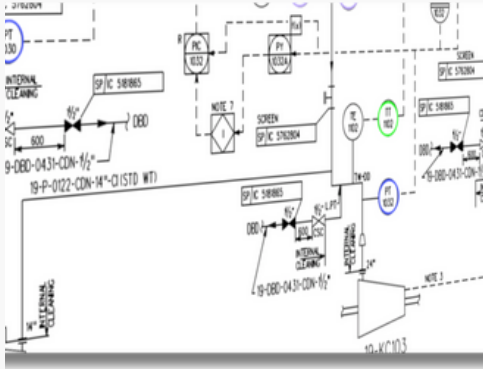
The RMP, developed entirely by CPC, serves as the **optimal tool for data monitoring and historisation** in any process. Its versatility also makes it an excellent choice for testing and commissioning any related control package.

RMP Features

- Monitoring of up to 80 variables, organised in 10 groups for display.
- Configurable datalogger and customisable screens.
- Access to the history of records in the database.
- Visualisation of the process status in a configurable diagram.
- Panel alarm.
- 2 operating modes: online and offline.
- Communication via OPC, what makes the RMP independent of the hardware used for control.



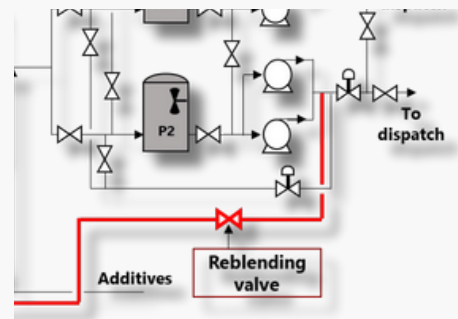
CPC Load Sharing Control Package



- **Expertise:** Possesses extensive experience in managing both single and parallel compression systems across a variety of installations, ensuring robust control and optimisation.
- **Innovation:** Developed an advanced Load Sharing Control Package for effective network loads management.
- **Versatility:** Highly adaptable to a range of gases and industrial applications; also proficient in managing other parallel-operating equipment, ensuring a unique control entity.

CPC Blending Package

- **Process:** Executes precise mixing of components following specific recipes to meet predefined product specifications.
- **Options:** Online blending and tank based mixing blending.
- **Goals:**
 - Standardise and integrate control packages.
 - Reduce maintenance and enhance availability.
 - Advanced controls based in component availability and ullage detection minimises reblending.



CPC Slug Management Package

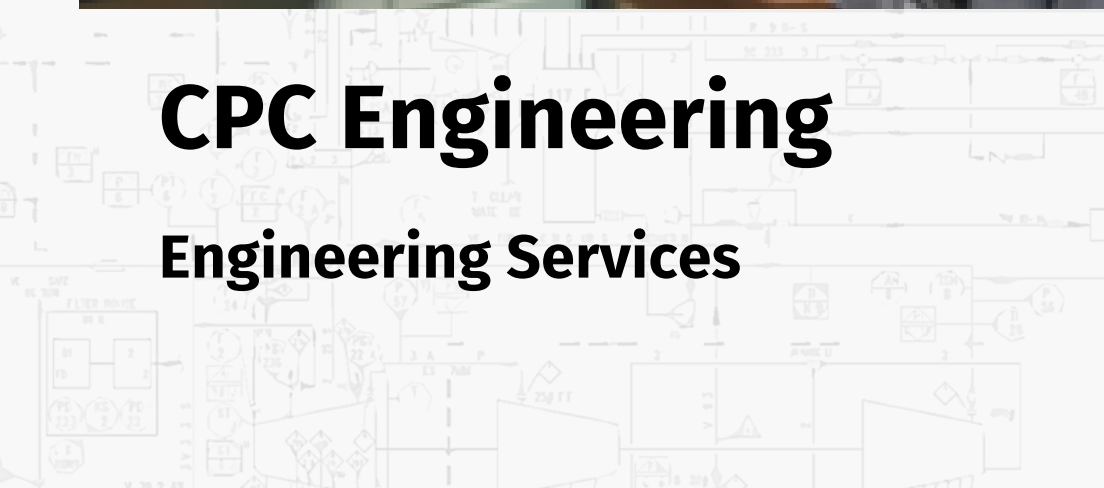


- **Structure:** Advanced Process Control used for strategic use of the available tank space.
- **Integration:** Slug controls fully integrated with normal controls implemented in the condensate paths.
- **Goals:**
 - Real-time volume available calculation
 - Available for one or several reception vessels.
 - Strategies adaptable to operations and process personnel expertise



CPC Engineering

Engineering Services



CPC Energy Efficiency Studies

CPC Engineering optimises energy consumption of the more relevant equipment and processes such as compression and pumping systems in the Oil & Gas, Petrochemical and Chemical sectors. Our strategic control adjustments result in significant energy savings and robust returns on investment, enhancing both efficiency and sustainability.



CPC FPSO Engineering Services

Over the past years, CPC Engineering has focused its efforts on the development and implementation of Advanced Control Solutions specifically tailored for the operations on FPSO platforms. Thanks to the extensive experience accumulated by its team of highly skilled professionals, CPC has achieved remarkable results in optimising all relevant processes covering main oil and gas paths as well as the control tuning of the utilities.



FPSO Solutions

- Initial Exploration and Customised recommendations.
- Configurable datalogger and customisable screens.
- Tangible Results.
- Accumulated Experience.
- Commitment to Sustainable Innovation.

CPC Controller Retrofit/Migration Services

CPC Engineering has extensive experience in upgrading and migrating old standalone controllers. Example of that are Protronic PS & PS2, Digitric P, P500, P700...



Standalone Controllers Migration 4-phase

- Phase 1: Careful extraction of the existing program from the controller.
- Phase 2: The extracted program undergoes a thorough translation and analysis via reverse engineering. This phase is essential to decode and understand the original system functionalities.
- Phase 3: After a complete analysis, the validated algorithm is implemented into the new language. This step involves careful integration to ensure full functionality within the new system environment.
- Phase 4: The final phase involves rigorous testing through dynamic process simulation. Both the original and the migrated programs are tested concurrently to verify that their functionalities remain identical, ensuring that the migration preserves the intended performance and reliability.

CPC Supervision and Integration Services

We specialize in supervising and integrating engineering projects, delivering advanced control and automation systems tailored to client needs. Our expertise spans managing multidisciplinary teams, ensuring compliance with industry standards, and optimizing industrial operations. With a focus on innovation and efficiency, we provide comprehensive solutions to drive success in complex engineering endeavors.

Our Expertise as Integrator and Supervisors

- Leading complex engineering projects.
- Supervising multidisciplinary project teams.
- Integrating advanced control systems.
- Ensuring compliance with standards.
- Managing project timelines effectively.
- Providing technical process solutions.
- Coordinating cross-departmental efforts.
- Delivering tailored automation systems.
- Optimizing industrial plant operations.
- Driving innovation in engineering design.



CPC Advanced Process Controls



Key to managing complex applications and processes. Over the years, CPC Engineering has specialised in designing and implementing controls for a variety of systems, including:

- Instrument air and Process Air systems.
- Steam Management.
- Gas compression complex networks series, parallel or mixed.

CPC Dynamic Process Simulation

Our service delivers precise process modelling that significantly enhances control system design and optimisation. Key benefits include:

Streamlined Validation: Efficiently confirms system designs before physical implementation.

Rapid Commissioning: Speeds up the commissioning process, reducing time to operation.

Safe Testing: Allows for the safe examination of hazardous scenarios without real-world risks.



CPC Training Courses



With decades of experience in the Oil & Gas, Petrochemical, and Chemical industries, CPC Engineering provides specialised courses in Control Systems & Optimisation. These courses are designed to equip engineers with different degrees of knowledge on advanced control features.

Our customised training prepare engineers to develop more reliable and flexible process controls, enhancing overall system performance across industry applications.



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