Advanced monitoring and control of sucker-rod pumping units
Overview

The Unico RPC Rod Pump Controller provides economical pump-off control of all sucker-rod pumping systems. Using sophisticated modeling and control software with a powerful digital signal processor (DSP), the RPC controller computes surface and downhole conditions to best regulate the starting and stopping of the pump via a separate motor controller or hydraulic system.

Comprehensive monitoring and reporting capabilities provide real-time surface and downhole dynamometer plots, daily gauging, fault and event logging, a user-configurable data sampler, and more. Wireless, radio, cellular, and satellite options allow monitoring at any distance. With optional GMC® Web-based telemetry software, users can monitor multiple fields simultaneously from virtually anywhere in the world. RPC units are rugged and have been designed to withstand the harsh environments of the oil patch.

Features

Hardware
- 12v, 24v, 115-230 VAC input
- Optional 380-460 VAC input
- Weatherproof design
- Rugged Nema 4R polycarbonate enclosure
- Extended temperature range
- Backlit graphic display/keypad
- Mass memory option

Inputs/Outputs
- Three analog inputs
- Two analog outputs
- Twelve logic inputs
- Six logic outputs
- Four configurable I/O points

Sensors
- Polished rod load cell
- Beam position inclinometer
- Tubing sensors input option
- Casing sensors input option

Communications
- Wired local/remote serial ports
- Modbus RTU protocols
- Bluetooth interface option
- MaxStream wireless radio option
- Cellular modem option
- Local WiFi communication option

Control
- Supports all SRP pump types
- Pump-off control
- Timer controller
- Automatic restart capability
- Utility rate saver
- Adaptive pump fill trigger level
- Gas Flow with AGA model
- Oil/belt/gearbox service reminders
- Diluent Pump control
- Pumping system simulator

Displays
- Surface and downhole dynamometer graphs
- Predicted surface and downhole dynamometer graphs
- Counterbalance assistant
- Gearbox torque
- Rod velocity
- Rod position
- Rod load
- Pump velocity
- Pump position
- Pump load
- Pump fill
- Pump stroke
- Daily fluid production
- Daily leakage loss
- Daily average pump fill
- Daily average pump speed
- Pump intake pressure
- Discharge pressure
- Tubing pressure
- Casing pressure
- Fluid level
- Fluid flow

Data Collection/Reporting
- Well production/performance report
- Time-stamped event/fault logging
- Time-stamped user-definable data sampler
- Gearbox torque/as-balanced gearbox torque graphs
- IPR curve graph
- Web-based monitoring/control
- Third-party head-end software interface

Optional Engine Control Module (ECM)