# SRP VSD

## Functions & Features List

Intelligence of the embedded SRP software in the Unico VSD improves production, offers efficiency and reliability;

- Real-time multiple constraint optimization
- Controls both AC induction motors and AC permanent magnet motors
- Pumping unit, rod string, and downhole pump models
- Tubing, casing, fluid, and reservoir models
- Automated system parameter identification
- Supports Conventional, Mark II, Reverse Mark, Rotaflex®, phased crank, beam and air balance geometries
- Rod string weight and resonance calculator
- Density and flow loss calculations from fluid and gas properties
- Deviated well compensation
- System simulation mode
- Manual, preset, and remote speed control
- Pump speed and power flow optimizers
- Extend range operation to twice base speed
- Single-, dual-, or triple-speed operation
- Rotaflex® racetrack mode with automatic cornering control
- Programmable crank angle speed-change set points
- Motor voltage, current, speed, and torque bar graph meters
- Gearb ox torque monitor and limiter
- Counterbalance monitor and assistant
- Crank angle and speed monitors
- Operates without rod load sensor
- Supports load cell input *(optional)*
- Pump flow monitor and production accumulator
- Pump fill monitor and optimizer
- Dual speed pump-off control prevents sand-in problems
- Casing and tubing pressure compensation
- Pump intake and discharge pressure monitors
- Fluid level monitor and control
- Input power meter and energy efficiency monitor
- Input, motor, rod, and lift power monitors
- Peak and regen power limiters
- Power and torque smoothing control
- Motion profile optimizer to reduce gas interference
- Downhole pump position, velocity, and load monitors
- Rod position and velocity monitors
- Rod load monitor and limiter
- Rod/pump friction monitor
- Actual surface and pump dynamometer graph generators
- Predicted surface and pump dynamometer graph generators
- Stored surface and pump dynamometer graphs
- Bridle separation monitor and minimum rod load control
- Belt-slip monitor and diagnostic alarm
- Diluent pump control-fixed or variable speed
- Automatic restart from faults and power outages
- Time-stamped event, warning, and fault logging
- Standard ANSI and Modbus RTU serial communications
- ControlNet®, Profibus®, Profinet®, or Ethernet communications *(optional)*
- Cellular or Satellite modem for remote communications *(optional)*
- 900 MHz and 2.4 GHz wireless radio communications *(optional)*
- Interface for multichannel analog data logging *(optional)*
- Windows computer and iOS handheld interface software
- Bluetooth communications(optional)
- WI-FI wireless local communications(optional)
- GMC® support and other SCADA systems via ModBus RTU serial communications



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