

## New Inventions Simplify Artificial Lift

Like the producers they serve, artificial lift companies are models of continuous improvement. From sucker rods to sensors, the industry's artificial lift experts are coming up with ways to increase efficiency and reliability while providing higher production.

These inventions include a variable frequency drive controller that can optimize any type of pump, a hydraulic rod pump controller that can withstand extreme weather, and a host of drives that reduce operating and installation costs.

Like many of these products, the Smart

Pumper™ from Houston-based Direct DriveHead Inc. aims to reduce costs while increasing production. The company describes Smart Pumper as a universal platform capable of controlling any variable frequency drive at speeds from five–1,000 horsepower, and of controlling hydraulic pumping devices.

According to Chief Executive Officer Greg Boyles, the Smart Pumper is a powerful programmable logic controller with built-in two-way communication that serves as a master controller to any VFD or hydraulic motor for precision pumping.

It logs data from a wide array of sensor and metering options, he adds.

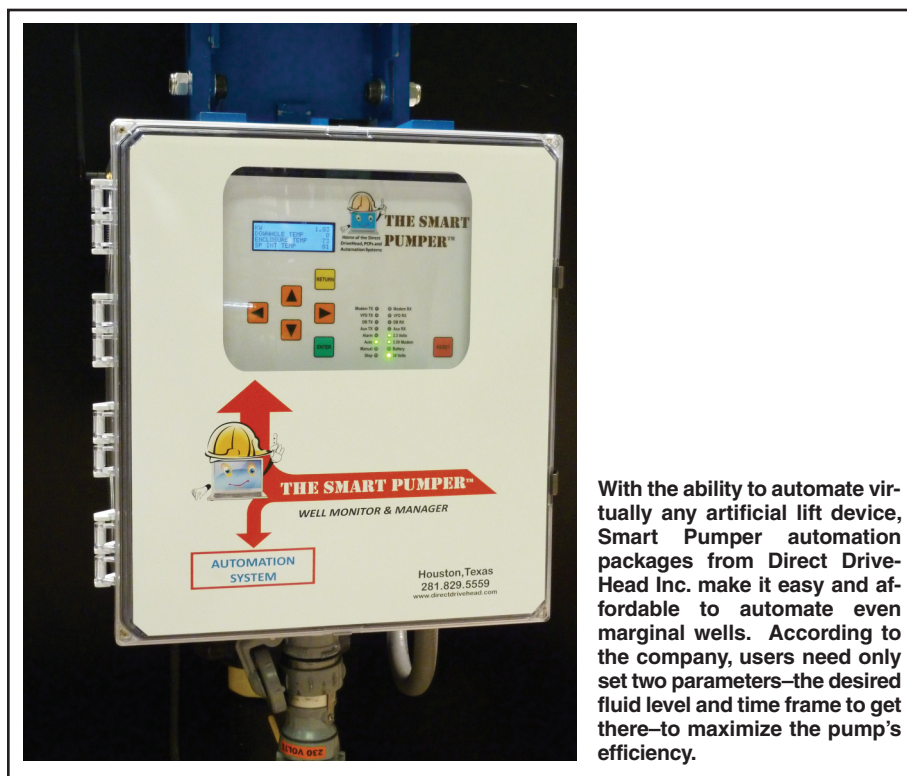
The unit measures 12 inches tall by 10 inches wide and two inches deep. It can be programmed locally using the LCD display and keypad or remotely through the Web or cellular networks, Boyles relates. He says that by packaging the device with customer-selected VFDs and enclosures, Direct DriveHead delivers a plug-and-play automation solution for any type of artificial lift system, including pumpjacks, electric submersibles, drive heads and hydraulic pumping equipment for any type of well.

"Within minutes of turning the Smart Pumper on, users can begin to control the operation of their well or facility from anywhere using their mobile device or desktop," Boyles says. "They only need to set two parameters—the fluid level they want and the number of days to reach that level—to maximize pump operation and efficiency."

From data logged from the VFD and other sensors, the Smart Pumper obtains the desired fluid level by adjusting pump speeds, Boyles says. He adds that it can alert users about malfunctions such as parted rods, holes in the tubing, and pump failure.

"With 20 hard-wired sensors and a 485 communications port, the number of sensors users can organize is almost limitless," Boyles says. "Each channel can be named, sealed and defined in terms of what the user wants to take, so it's easy for them to keep tabs on flowlines, tank levels, and gas flow, as well as monitor for hydrogen sulfide, carbon dioxide, and other gas conditions."

Boyles reports that the Smart Pumper is supported by most VFD manufacturers and backed by worldwide cellular coverage. □



**With the ability to automate virtually any artificial lift device, Smart Pumper automation packages from Direct DriveHead Inc. make it easy and affordable to automate even marginal wells. According to the company, users need only set two parameters—the desired fluid level and time frame to get there—to maximize the pump's efficiency.**