



PAMENSKY (WEG CANADA) & SELECT ELECTRICAL

How Custom WEG Drive Technology Increased Well Production by up to 40%



**SELECT
ELECTRICAL**
ENTERPRISES LTD.

INCREASING OILFIELD PRODUCTION WITH INTELLIGENT PUMP CONTROL



SUMMARY

Industry

Oil & Gas Artificial Lift

The Challenge

High flowline pressure limiting production

The Solution

WEG W22 Severe Duty Motor, WEG CFW11 Variable Frequency Drive & SEEL Intelligent Control System

Implementation

Designed and tested in-house by SEEL

Results

Measurable benefits for oilfield operators

Conclusion

The value of strong partnership

BACKGROUND

BACKGROUND

Select Electrical Enterprises Ltd. (SEEL), a privately owned electrical, automation, and controls company headquartered in Stony Plain, Alberta, has delivered automation solutions worldwide since 1988.

As a distributor and integrator of WEG motors and drives, SEEL partners with Pamensky (WEG Canada), the exclusive importer of WEG products in Canada, **to provide reliable automation technology to industries including oil & gas, mining, forestry and renewable energy**. Pamensky supported this project by ensuring timely supply of WEG CFW11 VFD, providing technical consultation on product selection, and backing the solution with local warranty and product support.

“SEEL components adapt seamlessly, offering a wide range of configurations to meet diverse operational needs.”

– Rob Caouette, CEO, Redhead Artificial Lift

One of SEEL’s long-term customers is **Redhead Artificial Lift**, an Alberta-based company specializing in artificial lift systems for oil & gas operations. Redhead designs innovative pumping technologies that help operators improve production efficiency and reduce operating costs.

Redhead™

THE CHALLENGE

Many oil & gas producers operate wells that produce into a shared pipeline. High flowline pressure on these common pipelines **prevents individual wells from producing at optimal flow rates, significantly restricting outputs.**



Redhead Artificial Lift identified this challenge as an opportunity to increase production by lowering flowline pressure at the wellhead. To address this, **Redhead developed a gear-driven multiphase pump (MPP series) capable of pumping liquids and gases together,** eliminating the need for traditional separation equipment.

However, **the pump required an advanced control solution capable of adapting to varying operating conditions,** while protecting the equipment from mechanical stress. Redhead turned to its long-time automation partner, SEEL, who worked with Pamensky **to ensure the appropriate motor and drive technology was available to support the system.**

THE SOLUTION



THE SOLUTION

SEEL engineered a complete drive and control solution using **W22 Severe Duty** and **CFW11 VFD**, supplied exclusively in Canada through **Pamensky**. By combining high-efficiency motors with intelligent drive control and SEEL's proprietary onboard software, the system delivers reliable operation while eliminating the need for an external PLC.



CFW11 VFD



W22 Severe Duty

Motor sizing for the Redhead MPP system varies by application, with typical installations ranging from

75 to 300 HP

depending on target production volumes and the differential pressure across the pump.

“The interface is intuitive and robust, enabling smooth communication between systems and operators.”

– Rob Caouette, CEO, Redhead Artificial Lift

THE SOLUTION

Key control features included:

Automatic Dual PID Control

- Suction pressure control to reduce flowline pressure and maximize well production
- Automatic switching to discharge pressure control during high-pressure conditions to prevent trip events

Automatic Pump Clean

- Intelligent detection of high torque conditions with programmed reversal cycles to clear obstructions

Integrated Shutdown & Protection

- Direct handling of analog and digital inputs within the VFD, including pressure and vibration monitoring

IMPLEMENTATION

The control software was **designed and tested in-house** by **SEEL** engineers, with field deployment carried out in collaboration with **Redhead Artificial Light**.



Timeline

Development and field testing spanned approximately **18 months**, before broader rollout.



Scalability

Following successful field validation, the solution is now being deployed to multiple end users across Alberta and beyond.



Ease of Integration

The onboard PLC functionality of the **WEG CFW11 VFD** reduced the need for external control hardware, simplifying installation, minimizing wiring, and improving overall system reliability.



Supply Chain

All WEG VFDs and motors were supplied through Pamensky, ensuring product authenticity, consistent availability, and access to local technical and warranty support.

Since the first
installation in 2021,
approximately

15 Redhead MPP Units

are operating across Western
Canada today.

All WEG motors and drives were supplied through
Pamensky, ensuring consistent product
availability, authenticity and local technical
support.



**“Built to withstand the most demanding
environments while maintaining peak
performance over time.”**

– Rob Caouette, CEO, Redhead Artificial Lift

RESULTS

RESULTS

The combined Redhead MPP pump, SEEL automation package, and WEG VFD technology delivered measurable benefits for oilfield operators:

20 to
40%

Higher well production,
depending on site
conditions



6-18 Month ROI,
depending on application



Reduced downtime through
intelligent control and
automatic pump cleaning



Improved reliability and
extended equipment run life

Because the MPP can pump liquids and gases together, the need for additional separation equipment is reduced or eliminated. Together, the solution enables oilfield operators to increase production, improve reliability, simplify operations, and maximize the value of existing well infrastructure.

CUSTOMER FEEDBACK

“SEEL technology—manufactured by WEG and supplied through Pamensky—is flexible, reliable, and easy to integrate. Redhead Artificial Lift has seen meaningful production gains and increased reliability thanks to the expertise and support provided by Select Electrical Enterprises.”

– **Rob Caouette**, CEO, Redhead Artificial Lift

CONCLUSION

The collaboration between **Redhead Artificial Lift**, **Select Electrical Enterprises** and **Pamensky** highlights the value of strong partnerships across the supply chain:

**WEG motors and drives
supplied through
Pamensky**

**SEEL's custom control
software and system
integration**

**Redhead's innovative
multiphase pump design**

Because the MPP can pump liquids and gases together, the need for additional separation equipment is reduced or eliminated. This results in less fuel gas being flared or utilized during the separation process, supporting lower operational costs and reduced environmental footprint.

EQUIPMENT SNAPSHOT

- **Motor:** WEG W22 Severe Duty Motor (200 HP shown; typical installations range from 75–300 HP depending on application)
- **Features:** 200 HP 575 V NEMA Premium Efficiency Inverter Duty Rated Class I, Division 2 Hazardous Location TEFC, IP55 Enclosure
- **VFD/Brand Model:** WEG CFW11 Variable Frequency Drive (supplied through Pamensky)
- **Application:** Redhead MPP Multiphase Pump
- **Industry:** Oil & Gas Artificial Lift
- **Location:** Western Canada