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Prostar Energy has designed and is operating the industry's first fully automated service rigs. Prostar's patented automated rig has been operational for ten years. It has over 200,000 engineering hours in the design and has over 45 patents issued or pending on the technology. Prostar built and operates nine rigs in Canada and has designed and built rigs in our Canadian facility that are operational in Alaska and Australia.

# FEATURES Summary

Prostar's service rig offers a comprehensive array of features and benefits that substantially improves safety, efficiency, and cost effectiveness of well servicing operations.

## Automate Safety

Prostar's cutting-edge technology redefines industry standards by drastically enhancing safety and efficiency. Through pioneering design, these rigs eliminate the need for manual handling equipment, integrating advanced automation, robust fail-safes, and ergonomic engineering to reduce risks significantly. Our fully integrated equipment and proprietary software streamline complex rig processes, enabling remote control operations. This step forward has resulted in Prostar having the safest rig in the business.



## **Automated Features**

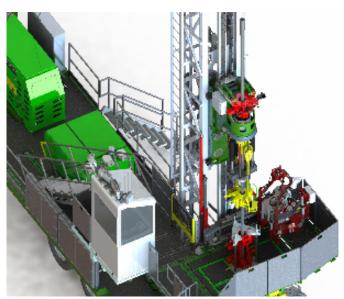
Prostar's rig automation elevates safety by removing workers from floors, catwalks, and mast, ensuring consistent, and safe hazard-free pipe tripping.

- Rig operations from a single control cab, minimizing personnel exposure to hazardous areas.
- Automated components, such as catwalk, tongs, elevators, and bails, reduce the need for direct worker interaction with machinery.
- Remote-controlled winch booms allow for safe load handling and placement from a distance.
- Preset operational limits, zone management systems, and API-certified components prevent errors and accidents.
- Ergonomic workstations promote worker well-being and reduce stress.

These features collectively result in an impressive 456% improvement in lifetime safety performance compared to industry averages.

# Carriage Control

Regulated speeds and over-pull protection allows the Operator to pull into something (like a stuck tubing hanger) slowly and accurately, giving him full control over the weight being pulled. This eliminates over-pulling, damage and injury. It's done by turning down pressure on the carriage and slowly increasing it with a dial for maximum control and setting maximum pull limits. Carriage speed may be regulated to run tools and pumps at a smooth pace, usually specified by the tool manufacturer increasing pump life.



# Tool Carrier (Top Drive)

- More functionality than a drilling top drive
- Hands free connecting and latching of pipe
- 360° bi-directional continuous hook rotation
- Integral Power Swivel for drilling operations
- PRESS tool can be used for immediate well control
- Backup Gripper can react 10,000 ft-lbs of torque and

### **Prevent Downtime**

Our equipment is built to meet all regulatory and API standards. We avoid integration problems that cause downtime by designing all the equipment to work together. When the rig is experiencing problems, remote access is granted to diagnose the problem through



## **Critical Controls**

Our system prevents the carriage from colliding with the crown, winch, tongs, or floor, mitigating the risk of structural damage or injury. Smart systems also prevent pulling into pipe rams, opening both slips and elevator's and opening BOPs with pressure underneath.



## **Automated Tongs**

Prostar's automated tongs and integrated torque gauge significantly enhance the safety, accuracy, and efficiency of tubing handling operations. Automated tongs eliminate the risk of injuries from manual handling, reducing on-site accidents. The integrated torque gauge with preset-able min/max ensures each connection is torqued to the precise specification, providing verifiable proof that minimizes the chances of tubing leaks and diminishes the necessity for premature repairs. Moreover, the data-driven capabilities of our torque gauge allow for real-time operational adjustments that not only minimizes downtime but also optimizes operations, setting a new standard in operational excellence.

## Environmental Benefits



### <u>Certified Clean Idle</u>

Reducing your environmental footprint with technology that meets rigorous emission standards, even during idle times.



## Less Engines

Integrated hydraulic catwalk, top-drive and support equipment means less engines on location reducing fuel consumption.



#### Secondary Containment

Prostar has developed rig matting with built-in secondary containment to prevent soil contamination in the event of a spill.

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#### **Electric Future**

Prostar is working towards rigs will be powered by electric motors, which are more efficient than diesel engines.

## Lower Operating Costs

- Eliminate spending on rentals such as light towers, power swivels, casing jacks and tongs.
- Reduce spending on tank trucks, bed trucks, picker trucks and co-rod handling.