

# QUANTUM<sup>TM</sup> NXT

## CYLINDER

Easy access for quick maintenance procedures and reduced downtime



## HMI

Advanced Diagnostics System detects maintenance issues before they occur



## SAFETY COVERS

Safe inspection of cylinders and water lines with solid metal frame and glass windows



## SIDE PANEL

Easy access to control module and integrated router for remote connection



## FRONT PANEL

Automatic lubrication system with filtration and cooling



## VP 15/52

**Max Operating Pressure**  
3585 bar (52,000PSI)

**Max Flow Rate**  
1.9 l/min

**Weight** 410 kg

**Cooling water**  
3.0 l/min at 20°C

**Physical dimensions**  
1.3m x 0.5m x 1.1m



## ESP 37/66

**Max Operating Pressure**  
4550 bar (66,000PSI)

**Max Flow Rate**  
3.8 l/min

**Weight** 628 kg

**Cooling water**  
6.0 l/min at 20°C

**Physical dimensions**  
1.8m x 0.66m x 1.27m



## ESP 74/66

**Max Operating Pressure**  
4550 bar (66,000PSI)

**Max Flow Rate**  
7.6 l/min

**Weight** 1370 kg

**Cooling water**  
12.0 l/min at 12°C

**Physical dimensions**  
2.0m x 1.08m x 1.36m



# ADVANCED TECHNOLOGY

The TECHNI Waterjet™ Quantum NXT™ Electric Servo Pump incorporates core "direct servo" technology that was first applied by NASA for the Space Shuttle Program by replacing old-fashioned hydraulic cylinders with new, highly compact, efficient, reliable and infinitely controllable Servo Linear Actuators.

This same style actuator is used today in many high-end machine tools and presses replacing inefficient hydraulic systems. Similarly, TECHNI Waterjet™ is the first water jet pump manufacturer to utilize "direct servo" technology in an ultrahigh pressure waterjet pump and has developed patented designs to integrate the core technology into the most efficient, reliable and controllable UHP waterjet cutting pump.

- > **Most Efficient Waterjet Pump**  
Up to 60% more efficient than standard hydraulic intensifiers
- > **Easiest Maintenance**  
Easy access and improved visual diagnostics
- > **Smartest**  
Intelligent Diagnostic Control reduces maintenance and increases uptime
- > **Lowest Cooling Water Requirement**  
Up to 75% less cooling water than standard hydraulic intensifiers
- > **Most Quiet**  
70dBA with almost silent operation
- > **Smallest Footprint**  
Up to 50% less sq. ft. than an average hydraulic intensifier and lower profile and more ergonomic
- > **Longest Life Fittings and Tubing**  
Due to the elimination of "dead head" pressure spikes
- > **Superior Design**  
Quick-change seal components for the fastest seal change in the industry
- > **Environmentally Friendly**  
Significantly less consumption of water & power, and minimal oil usage compared to standard hydraulic intensifiers

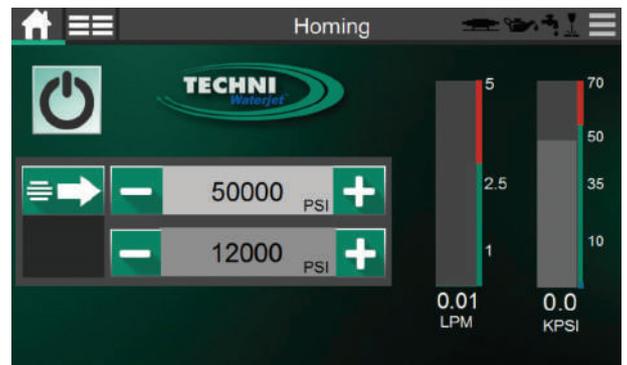
## ADVANCED DIAGNOSTICS (option) - Predictive maintenance

Waterjet pumps are designed to operate at pressures high enough to cut through steel, so unless they are maintained correctly, they have the power to self-destruct. This is because once leaks develop, the water is at such high pressure that it will erode away the very parts which are designed to contain the water.

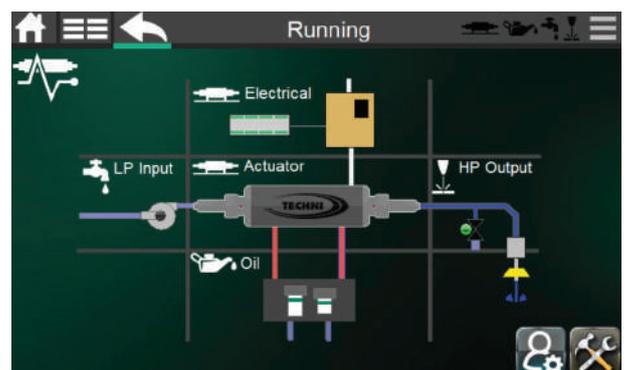
The combination of information from the Advanced Diagnostic sensors and the Servo Drive technology are fed into a computer, where 30 years of waterjet experience have been used to develop algorithm's to accurately predict which parts are close to failure.

### Advanced Diagnostics System capabilities:

- To ensure the ESP continues to perform at its capacity without unplanned downtime due to maintenance issues.
- To protect the ESP against damage due to poor maintenance practices and unforeseen utility failures.
- To minimize the risk of ESP failure, even if maintenance routines are neglected.
- To protect the ESP if the incoming utilities fall below the minimum requirements to ensure safe operation.
- To help an operator maximise the output of the ESP without causing unnecessary maintenance downtime.
- To diagnose potential maintenance issues before the ESP fails, and then advise the operator how to perform the maintenance.



Advanced diagnostics overview and quick access on home page



Quick and easy to oversee the entire system from only one page