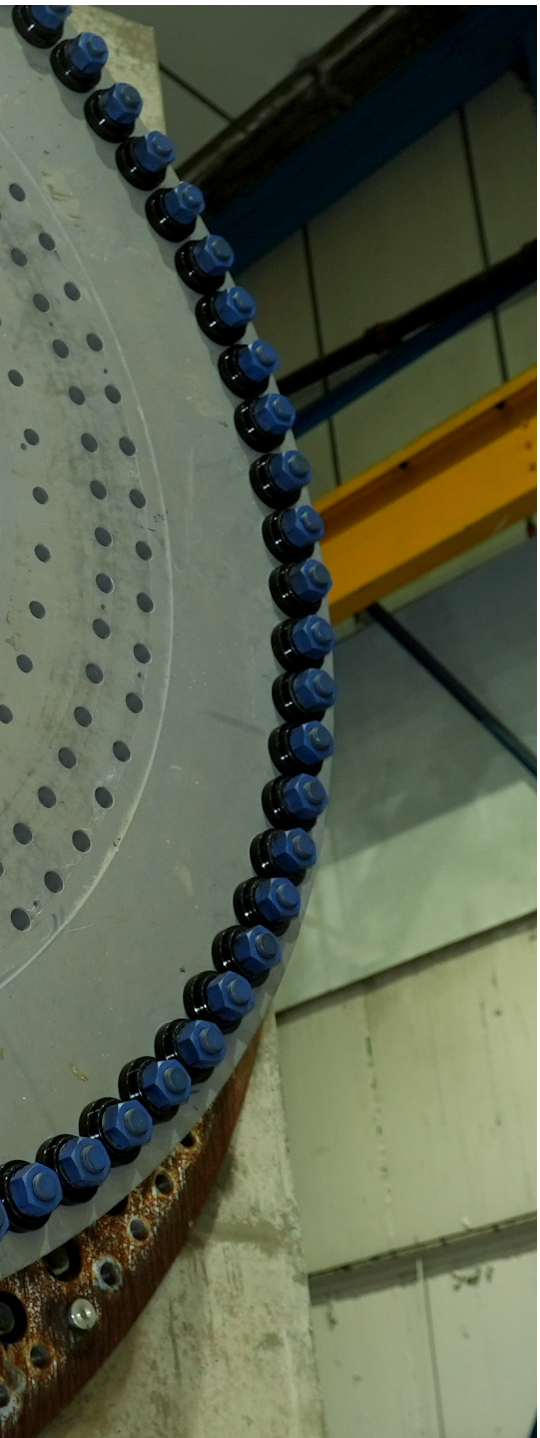
Portable power for modern wind maintenance

Angie Wallace, Product Line Director at Enerpac Tool Group, discusses how technician feedback, offshore working conditions and the growing demand for mobility shaped the development of the LU-Series hydraulic pump for wind installation and maintenance teams.

PES: Welcome to PES Wind, it's great to have you with us. To start, can you set the scene for us? What were you hearing from wind installation and maintenance teams that sparked the development of the LU-Series?

Angie Wallace: What we consistently heard from wind technicians was that much of their day-to-day work didn't require large, continuous-duty equipment. Instead, they were completing smaller, intermittent tasks, such as routine torque checks, maintenance work or servicing a limited number of bolts across multiple turbines. Existing solutions were often oversized, difficult to transport and not optimized for that type of work.

The LU-Series was developed to address that gap: a lightweight, portable pump designed specifically for intermittent-duty applications, delivering the performance crews need without the burden of larger systems.



PES: When you look at wind projects today, where are the biggest pressure points for crews working on installation and maintenance?

AW: The biggest pressures come down to mobility, time and environment. Technicians are regularly moving equipment up towers, between turbines and into confined spaces, often within tight maintenance windows where efficiency is critical.

This combination means equipment must be easy to transport, quick to deploy and reliable in operation to keep work moving efficiently.

PES: There's often a gap between equipment that works well on paper and equipment that really performs on a turbine or offshore platform. How did those real-world working conditions shape the LU-Series?

AW: There's often a clear gap between how equipment performs in controlled environments and how it holds up on a turbine or offshore platform, and closing that gap was a key focus in the LU-Series development.

Rather than relying on marketed specifications alone, we looked closely at real-world performance, including our own and competitive products, to ensure LU delivers where it matters.

Ultimately, the LU-Series was built and validated around how tools are actually used, carried vertically, moved frequently and operated in constrained, demanding environments, ensuring performance that is not only competitive on paper, but dependable and predictable in real-world offshore conditions.

PES: Can you talk us through the thinking behind the design, and how feedback from technicians and engineers influenced the final product?

AW: The design philosophy centered on three core principles: true portability, optimized flow and serviceability.

Feedback from technicians directly shaped the product. For example, the need for easier transport led to multiple carry points and ergonomic handling. Service feedback drove features like detachable power cords and accessible components, while usability feedback influenced visibility improvements such as the upward-facing gauge.

The result is a product designed not just for performance, but for how technicians actually interact with it in the field.

PES: Reliability is obviously critical in wind, especially when access is difficult. From your perspective, what does reliable hydraulic power mean in day-to-day operations?

AW: Reliable hydraulic power means consistent, repeatable torque performance every time the tool is used, even in real working conditions. It also means the pump operates as expected without unexpected shutdowns or failures, especially in situations where access to the turbine is limited.

Ultimately, it's about giving technicians confidence that the equipment will perform when they need it, without adding complexity or risk to the job.

PES: How does that reliability translate into practical gains for operators, whether that's improved efficiency, safer working conditions or reduced downtime?

AW: In practical terms, reliability allows crews to complete more work within the same maintenance window. It reduces rework, minimizes delays and ensures consistent results across operators.

More broadly, it improves efficiency, enhances safety by reducing unnecessary handling and repeated setups and helps reduce overall turbine downtime.

PES: Offshore environments can be pretty unforgiving. What practical considerations did you prioritize to make sure the LU-Series performs consistently in those settings?

AW: Offshore and other harsh operating environments were a key consideration throughout the LU-Series design and validation process. Development focused on delivering durability, thermal stability, and predictable performance under demanding real-world conditions.

The system underwent extensive endurance and environmental testing to verify long-term reliability, including high-temperature operation, mechanical impact resistance, and pressure verification under sustained load conditions.

Integrated protection features, such as continuous temperature monitoring and automatic shutdown functionality, were incorporated to help protect components and maintain controlled operation during extended use. Combined with global compliance and EMC validation, these efforts were aimed at ensuring consistent, reliable performance across challenging industrial applications.

PES: From a technician's perspective, what are the small but important details that make a difference when transporting, setting up and using this kind of equipment?

AW: It's often the small details that have the biggest impact.

Clear visibility is a key advantage. Features like the upward-angled, large analog gauge allow operators to quickly read pressure without stopping or repositioning, improving both accuracy and workflow.

Ease of control and operation also matters; a detachable pendant with secure onboard storage keeps controls protected, accessible, and out of the way when not in use.

Angie Wallace

Serviceability is another critical detail. Components such as an easy-access gauge and detachable electrical interfaces (pendant and power cord) simplify inspection, calibration and replacement, reducing downtime and making maintenance more straightforward in the field.

Durability plays a major role in day-to-day use. Protective elements like the front component shield and structural roll cage help safeguard key components from impacts, debris and harsh jobsite conditions, increasing reliability over time.

Finally, integrated features like cord management and clearly marked electrical access points (IEC port, circuit breaker) contribute to a cleaner, more organized setup, making the unit easier to use consistently and safely.

Together, these details help technicians work more efficiently, maintain the equipment more easily, and rely on consistent performance in demanding environments.

PES: Ease of use can sometimes get overlooked in heavy industrial equipment. How did you approach making the LU-Series more intuitive without compromising performance?

AW: Our approach was to simplify the operator experience while maintaining performance.

That meant improving visibility, simplifying connections and making service points easier to access. Features like detachable pendants, quick-access gauges and intuitive layouts help reduce setup time and make the system easier to use in real-world conditions.

PES: Are there any specific features or innovations in the LU-Series that you think could genuinely change the way crews approach certain tasks?

AW: The most impactful shift is the combination of lightweight design with purpose-built performance for intermittent tasks.

Instead of relying on larger systems designed for continuous use, crews now have a solution tailored to smaller jobs. This enables them to move faster between turbines, reduce setup time and approach maintenance work more efficiently overall.

PES: Looking at the bigger picture, how does the LU-Series fit within Enerpac's wider wind portfolio, and what gap does it fill?

AW: The LU-Series fills a critical gap in the portfolio.

While larger pumps are designed for heavy-duty, continuous operations, the LU-Series provides a dedicated solution for smaller, intermittent maintenance work. Together, this creates a more complete set of tools aligned to the full range of wind applications.

PES: The wind sector is evolving quickly, with larger turbines and more complex installations. How are those trends influencing the way Enerpac thinks about future hydraulic solutions?

AW: As turbines become larger and installations more complex, maintenance strategies are evolving to maximize uptime and efficiency.

This is increasing demand for portable, easy-to-use solutions that allow technicians to work quickly and reliably across distributed sites, reinforcing a continued

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focus on mobility, efficiency, and application-specific design.

PES: Collaboration across the industry is becoming more important. How closely do you work with operators, OEMs or contractors when developing new tools like this?

AW: Collaboration is a critical part of development.

We work closely with technicians, distributors, and end users throughout the process to validate requirements and gather feedback. Early field trials and direct input ensure the final product is aligned with real operational needs before launch.

PES: Finally, looking ahead, what does supporting the next phase of wind energy growth mean for Enerpac, and where do you see the biggest opportunities to make an impact?

AW: Looking ahead, the next phase of growth in the wind industry is being driven by three major waves, each creating new opportunities for Enerpac to expand its impact.

The first is the continued push toward electrification and energy security, where large-scale investment and global deployment demand reliable partners with the capability to support operations anywhere in the world. Enerpac's global footprint and position as the leading hydraulic tools supplier enable consistent support for customers, even in the most remote and demanding locations.

The second wave is the industrialization of offshore and the rapid emergence of floating wind, which is increasing complexity both topside and subsea. Here, Enerpac's proximity to onshore operations, combined with its ability to support offshore execution, allows for seamless alignment across installation, maintenance, and service activities.

The third wave centers on system integration and standardization, where the industry is moving toward more connected, data-enabled solutions. Enerpac is responding by integrating data collection capabilities into its tools, advancing standardized battery platforms, and aligning software across multiple tool systems.

Together, these focus areas position Enerpac to play a critical role in supporting the scalability, reliability, and efficiency required to accelerate global wind energy expansion.

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