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CHAMP Turbopump Selected for Masten Space System's Xogdor Rocket

Masten Space Systems has selected the Compact High-Performance Affordable Modular Pump (CHAMP) turbopump for its new Xogdor rocket. Xogdor is Masten's sixth vertical takeoff and vertical landing rocket that will be used as a state-of-the-art test vehicle for critical Artemis and commercial space technologies.

The CHAMP turbopump is a single-shaft, LOX/Methane turbopump that can be used as a stand-alone turbopump for small engines or combined with additional turbopumps in parallel for increased thrust-class engines. It utilizes a state-of-the-art flow path design, along with a combination of additive manufacturing and conventional machining to minimize cost. P3 Technologies will manufacture, assemble, and perform check-out testing of the CHAMP turbopumps at its facilities in Jupiter, Florida.

"The CHAMP turbopump provides a high-performance, reliable, and low-cost solution for Xogdor," said Dave Masten, CTO and founder of Masten Space Systems. "As our most advanced rocket to date, Xogdor will allow us to conduct critical flight tests that enable safe, precision landings for robotic and human missions to the Moon and Mars."

"The CHAMP turbopump incorporates four generations of experience and has proven to be quite versatile over the past two years of testing," said Philip Pelfrey, President of P3 Technologies.

Masten and P3 Technologies have previously collaborated on several programs, including a line of electric pumps, or e-pumps, that enable an affordable propulsion system for smaller launch vehicles and landers. P3 Technologies is proud to support Masten on this latest program.

