

New Tech Inline Fracking Tool Integrates Pumping and Digital Pressure Control Into the Drill String

FRESNO, CA, UNITED STATES,

September 28, 2026 /

EINPresswire.com/ -- Kenneth O. of Fresno, CA is the creator of the New Tech Inline Fracking Tool, a multi-stage, single-piston pumping system designed to provide an alternative to conventional surface-mounted multistage triplex pump arrangements used in hydraulic fracturing and related wellbore operations. The system

integrates the pumping assembly directly into a standard 5.5-inch drill pipe connection, allowing the tool to be incorporated into the drill string at the drill deck floor and interfaced with existing top-drive, rotary-table, or Kelly drilling configurations.



The tool is comprised of a cylindrical central piston housing with upper and lower check valves that control fluid movement through the assembly. A central electrically actuated pulser drives the multistage piston that draws drilling or fracturing fluid supplied by the rig's existing pumping system into the tool and pressurizing the fluid for controlled injection into perforated formations. A high-side bleeder valve provides a mechanism for releasing pressure during and after fracturing operations, while additional high-side check valves help maintain programmed pressure conditions. An integrated electronic control unit (ECU) provides programmable pressure ramps, digital monitoring, and recording of operational data to create a more centralized method for controlling and documenting the pumping cycle.

The New Tech Inline Fracking Tool is designed to be handled and installed directly by the drill crew unlike conventional arrangements that require large surface-mounted triplex pumping units, cranes, transportation equipment, and extensive surface infrastructure. This configuration can reduce the surface equipment footprint while limiting equipment transportation, setup, and crane requirements. The system is also intended to operate in conjunction with the rig's existing triplex mud pump for fluid displacement and circulation before and after the fracturing stage.

The tool offers well control support. It is designed to be pumped through before and after

fracking, including slug before pulling drill string. It can be used to pump steam into formation, and oil and water out. It might replace some grasshopper rod pumps and make the oil field fully automated and remotely controllable.

Key features and benefits include:

- Inline drill-string configuration: Integrates the pumping assembly into a standard 5.5-inch drill pipe connection rather than relying exclusively on large surface-mounted pumping equipment.
- Single-piston multi-stage operation: Uses a central electrically actuated piston and multiple valve stages to control fluid intake, pressurization, and discharge.
- Programmable pressure ramps: An integrated ECU enables operators to establish controlled pressure stages during hydraulic fracturing operations.
- Reduced crane dependence: Installation and handling are designed around the drill crew and drill-string configuration, potentially reducing heavy-equipment handling requirements.
- Well-control support: The system is designed to allow drilling mud circulation following fracturing to help restore the hydrostatic head required for well control.
- Multiple pumping applications: The underlying pumping architecture may also be adaptable to marine bilge pumping, firefighting, vessel water handling, and other high-volume fluid-transfer applications.

During a typical operation, the rig's conventional triplex mud pump can be used to displace drilling fluids into or out of the wellbore while the inline fracturing pump remains inactive. Pump strokes can be calculated and monitored to provide controlled fluid displacement. When the hydraulic fracturing stage begins, the inline pump is activated to pressurize and inject fracturing material into the formation at the programmed pressure. Following the fracturing stage, the inline pump can be deactivated while the rig's mud pump resumes circulation of appropriately weighted drilling fluid.

This operating sequence is intended to provide a more continuous approach to fluid management and well control. Restoring the appropriate hydrostatic head before opening or manipulating the drill string can help reduce the potential for uncontrolled fluid movement, well kicks, and associated well-control events. The system is designed to operate with the blowout preventer's pipe rams, which provide wellbore isolation during pressure operations. The system seeks to reduce unnecessary equipment changes and streamline post-fracturing procedures by integrating the fracturing stage into the drill string and retaining the rig's existing circulation capabilities.

Beyond hydraulic fracturing, the pump architecture may have applications in high-volume water transfer. In offshore drilling operations, including semi-submersible platforms, a high-capacity version could potentially be used for rapid removal of ballast or bilge water. The system's ability to generate high flow rates and hydrostatic head may provide an alternative to conventional marine pumping arrangements while potentially reducing power requirements.

The same pumping principle could be adapted for a range of watercraft, from recreational vessels requiring relatively compact bilge pumps to commercial ships, barges, and cargo vessels requiring substantially greater pumping capacity. Additional applications could include firefighting and other high-volume water-transfer operations.

The system may also be configured for vessel side-thruster applications. Its self-priming capability is intended to support above-level operation, while an appropriate installation could allow the pumping assembly to be incorporated without requiring a direct hull penetration at the pump location. The initial configuration is based on the design without a pressurized loop to provide a foundation for further development of the pumping architecture.

New Tech Inline Fracking Tool is ultimately designed around the integration of pumping, pressure control, fluid circulation, and operational data collection into a single drill-string-mounted assembly.

Kenneth filed his Utility Patent with the United States Patent and Trademark Office (USPTO) and is working closely with [InventionHome](#), a leading invention licensing firm, to sell or license the patent rights to his New Tech Inline Fracking Tool. Ideal licensing candidates would be U.S. based product manufacturers or distributors looking to further develop and distribute this product innovation.

Companies interested in the New Tech Inline Fracking Tool can contact InventionHome at member@inventionhome.com. Inventors currently looking for assistance in patenting, marketing, or licensing their invention can request information from InventionHome at info@inventionhome.com or by calling 1-866-844-6512.

About InventionHome®

InventionHome® is a top-rated invention marketing and product licensing company dedicated to helping inventors successfully patent, prototype, and promote their new product ideas. From securing intellectual property to connecting with potential licensees, InventionHome® offers a streamlined path to commercialization. Learn more at <https://www.inventionhome.com> or email info@inventionhome.com.

For expert guidance on every step of the invention process, visit our growing library of inventor resources and articles at <https://inventionhome.com/articles>.

InventionHome
InventionHome
+1 866-844-6512

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/945850271>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2026 Newsmatics Inc. All Right Reserved.