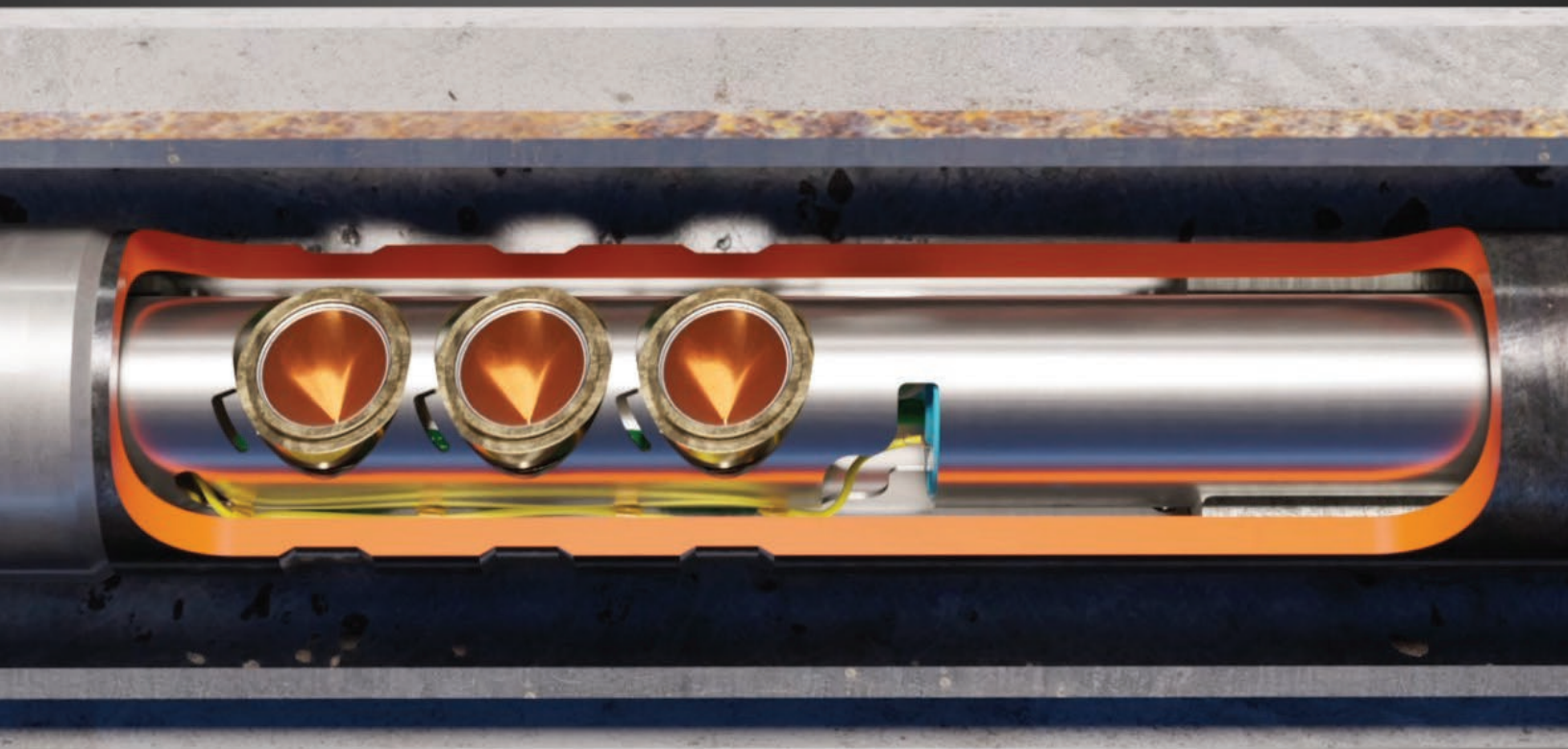


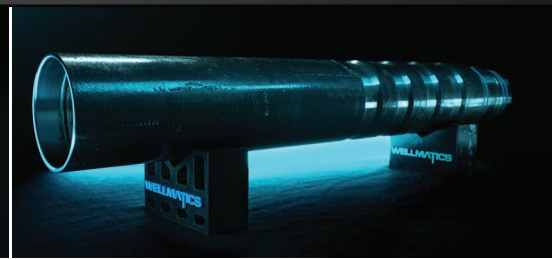
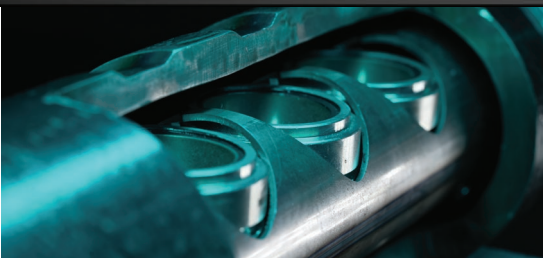


PHIRE LINE



AUTOMATIC ALIGNING PERFORATING SYSTEM

Easy to implement. Easy to use. Easier to deploy



Align your perforations with the PHIRE LINE Automatic Aligning Perforating System.

Experience the future of perforating technology - accuracy and efficiency in perfect harmony.

Don't miss out on this revolutionary advancement!

WELLMATICS

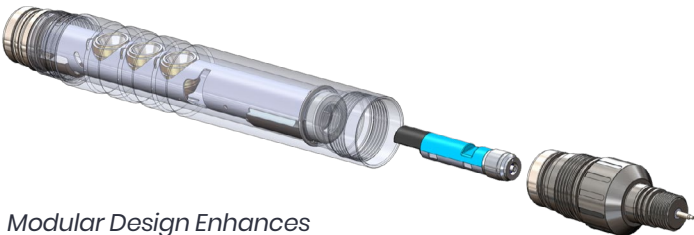
THE PHIRE LINE DIFFERENCE

In the dynamic domain of unconventional well technology, achieving precise perforation orientation remains a top priority. The pursuit of exact azimuthal alignment while simplifying hardware has long been hindered by the limitations of existing solutions, plagued by issues of reliability, inefficiency, and economic constraints.

Introducing our innovative solution—the PHIRE LINE Gun System, poised to drive a significant transformation within the industry. This cutting-edge technology empowers operators to attain precise perforation orientation within a 5-degree range of the desired azimuth. Internally oriented components, enabling the automatic alignment of the charge tube, eliminating the need for externally oriented hardware like eccentric weight bars. This reduces system complexity and enhances reliability.

Our fully modular design significantly minimizes human-related errors and assembly time for orientation hardware, guaranteeing superior perforating operations. This departs from conventional oriented perforating procedures, which typically demand specialized hardware and personnel for gun string preparation and execution.

Welcome to a new era in perforating technology with the PHIRE LINE Gun System—a revolutionary advancement promising precision, efficiency, and enhanced reliability, while minimizing the potential for human errors, like never before.



Modular Design Enhances
Wellsite Service Delivery

WHY PHIRE LINE

UNMATCHED PRECISION

Experience flawless alignment and pinpoint precision in every perforation.

EFFICIENCY REDEFINED

Boost your productivity with rapid perforating assembly, reducing downtime and increasing output.

USER-FRIENDLY INTERFACE

Our system is designed for ease of use, making it accessible for all levels of operators.

RELIABILITY YOU CAN TRUST

Built with durability in mind, the PHIRE LINE Gun System is engineered to withstand the harshest wellbore conditions, providing you with a reliable solution.

CUSTOMIZABLE OPTIONS

Tailor the system to your specific needs with a range of customization options.

SPECIFICATIONS

DIAMETER	3.25 in.		
SHOT PHASING	0°	180°	90°/270°
SHOT DENSITY	Up to 8 Shots		



THE PHIRE LINE IN ACTION

Field Test Location: Permian Basin
Date: July 2023

Objective: Assess the PHIRE LINE Gun System's precision in achieving perforation alignment within a specified target window of plus/minus 10 degrees.

Background: The customer aimed to enhance the accuracy and efficiency of their oriented perforating operations. The PHIRE LINE Gun System was identified as a potential solution to address this challenge.

Test Procedures:

- Deploy the PHIRE LINE Gun System, comprising a string of 10 guns with 3 shots per gun at zero degrees phasing.
- Conduct three series of perforating runs using the PHIRE LINE system with a focus on precise wellbore orientation.
- Collect real-time relative bearing and deviation measurements to validate alignment accuracy.

Field Test Results:

- **Alignment Accuracy:** The PHIRE LINE Gun System consistently achieved wellbore orientations within or below 5 degrees from the planned target, exceeded the plus/minus 10-degree window. (see Figure 1)
- **Perforation Efficiency:** Test results confirmed the system's efficiency in achieving perforation orientation, leading to reduced breakdown times and lower treating pressures.
- **Safety and Efficiency:** The modular design of the PHIRE LINE Gun System significantly reduced manual intervention, enhancing both safety and operational efficiency.

Conclusion: The field test of the PHIRE LINE Gun System exceeded expectations in achieving precise wellbore alignment. With alignments consistently within 5 degrees of the target, surpassing the goal of plus/minus 10 degrees, it offered a compelling solution to improve wellsite perforating operations.

RUN #1		RUN #2		RUN #3	
RB	DEV	RB	DEV	RB	DEV
-2.8	89.2	2.5	91.9	-2.6	90.2
-5.1	89.1	-3.8	91.8	-5.0	87.8
-4.5	91.2	1.2	90.2	3.5	90.3
-0.1	90.8	-3.2	91.7	2.5	89.8
-3.0	90.2	2.0	92.7	0.9	87.1
4.1	89.2	1.9	90.7	0.9	90.0
1.7	93.7	7	91.7	0.5	85.4
3.6	90.6	-2.0	88.8	-5.2	89.7

Figure 1
Relative Bearing and deviation data from all three runs confirm orientation of all shots within +/- 5 degrees of 0.



Figure 2
PHIRE LINE Gun System in action. All shots automatically lined up

STRYKEZONE ZeroN

OPTIMIZING ORIENTED PERFORATIONS

The StrykeZone ZeroN shaped charge seamlessly integrates with the PHIRE LINE gun system, providing reliable delivery for optimal perforation in zero-degree operations. Engineered with technical precision, it sets a new standard for consistent and optimal hole performance. Bundled with the PHIRE LINE gun system, it offers a turnkey solution for zero-degree perforating, empowering engineers with precision and control. Available in multiple sizes, the StrykeZone ZeroN shaped charge transcends conventional methods, reshaping completion engineering with enhanced operational efficiency and unmatched technical innovation.

StrykeZone ZeroN – a transformative force redefining technical boundaries in fracture stimulation.

Experience unparalleled efficiency for zero-degree perforating jobs.



PHASE	CHARGE	CASING	EHD INCHES	STANDARD DEVIATION
0	ZeroN (S)	5.5" 20#	0.31	3%
0	ZeroN (M)		0.35	2%
0	ZeroN (L)		0.39	5%
0	ZeroN (XL)		0.55	4%
0	ZeroN (S)	5.5" 23#	0.31	3%
0	ZeroN (M)		0.38	3%
0	ZeroN (L)		0.41	2%
0	ZeroN (XL)		0.61	4%