QuantumPro, Inc.

PerfTrac™-R

Universal Snap-On Nano Particle Tracer Device for Perforating Guns

QuantumPro, Inc. | Nanotechnology-Enabled Well Diagnostics

Product Overview

PerfTrac™-R is the industry's first universal snap-on nanoparticle tracer cartridge designed to tag perforating charges with a precise, high-fidelity nanoparticle tracer payload. Unlike traditional liner-impregnated tracers, PerfTrac™-R mounts directly onto the charge face and releases its full tracer mass instantly with the detonation event—injecting nanoparticles into the formation exactly at perforation time.

PerfTrac™-R is gun-agnostic, requires no OEM (Original Equipment Manufacturer) modification, and is installed within minutes during gun loading, dramatically simplifying deployment while enabling fully standardized perforation diagnostics.

Key Features

Universal Compatibility

- Works with any perforating system (Halliburton, SLB, GEODynamics, Hunting, Dyna-Energetics, etc.).
- Attaches directly to the charge face—no liner changes needed.

Precision Nanotracer Delivery

- Controlled payload of 2–2.5 grams.
- 10X more tracer than deployments in impregnated liners.
- High-purity nanoparticle loading within a PLA (Polylactic Acid) carrier.
- Consistent tracer release with charge detonation.

Operator Value

- Identify active vs. inactive perforation clusters.
- Map near-wellbore flow behavior.
- Quantify cluster efficiency and stimulation distribution.
- Detect frac hits and inter-stage communication.
- Improve completion design for higher EUR and reduced mis-stimulation.

Perforating Company Value

- Creates a premium differentiator with zero changes to gun inventory.
- Fast snap-on installation improves operational flexibility.
- Generates additional revenue per stage.
- Avoids OEM delays and specialized trace liners.

Technical Specifications

- Device Type: Snap-on nanotracer cartridge
- Housing: High-strength ballistic polymer
- Carrier: PLA nanotracer matrix
- Payload: 2.0–2.5 g
- Operating Temp: Up to 325°F (163°C)
- Deployment: Adhesive-bonded rapidly to charge face
- Detonation Response: Instant tracer release
- Compatibility: All major perforating systems

Why PerfTrac™-R Changes the Game

PerfTrac™-R transforms perforating diagnostics from an OEM-dependent process into a universal, rapid-deployment technology. Operators gain better stimulation analytics, and service providers gain a flexible, high-margin add-on without modifying gun design.

Why Choose QuantumPro, Inc.?

With over 20 years of industry experience in subsurface reservoir modeling, geomechanics, nano-tracing, and advanced technology evaluation, our team of experts offers unparalleled expertise in designing cost-effective and technically optimized ultra-high-resolution nanoparticle tracer reservoir monitoring programs.

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