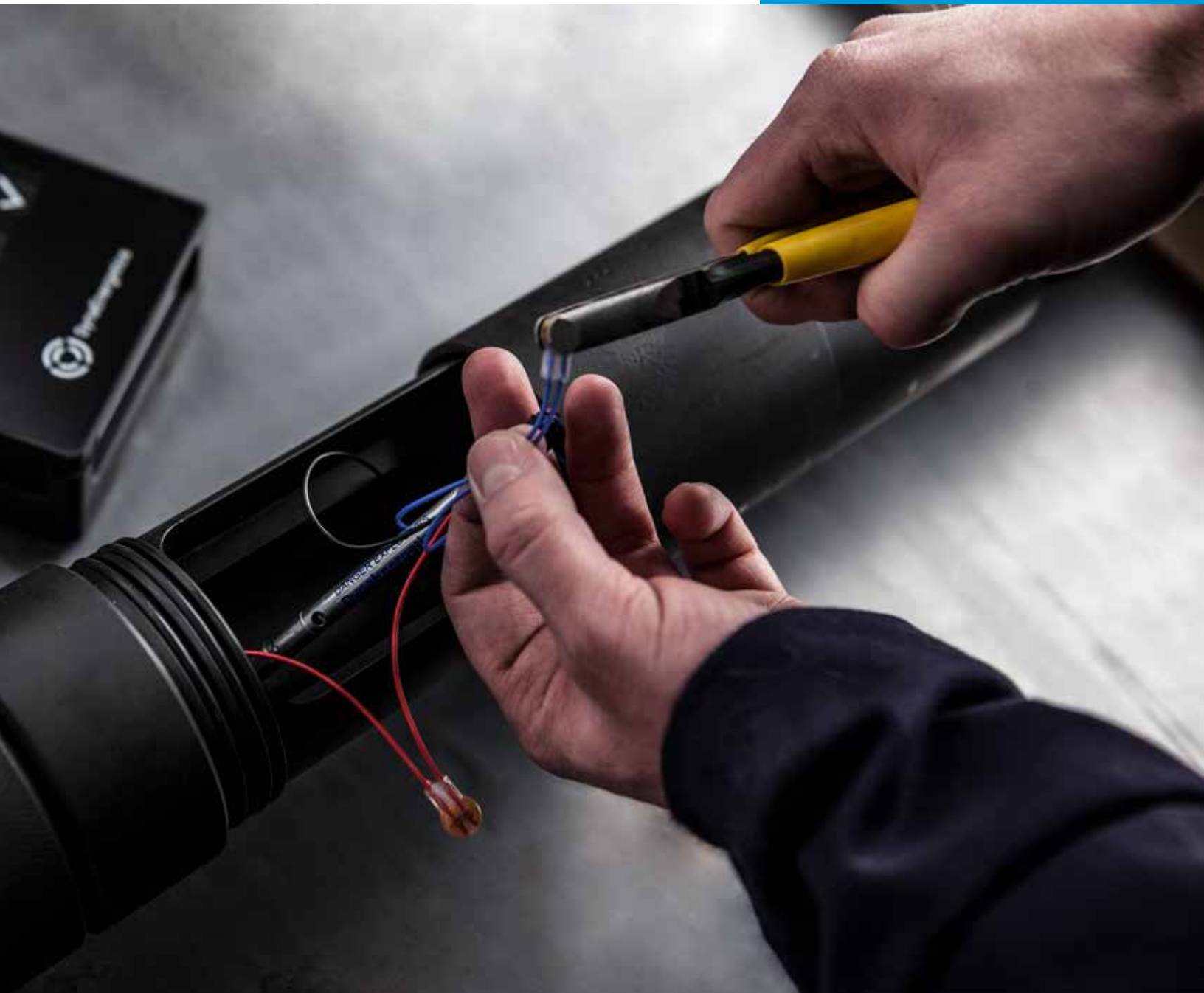


DynaSelect™ System

Plug-n-Perf Optimized



PLUG-N-PERF MADE SAFER, MORE EFFICIENT AND MORE RELIABLE

The DynaSelect™ System sets a new standard in dependable performance safety and operational cost savings in selective perforating. Compare the impact of DynaSelect™ to traditional selective perforating tools, and you will see a real difference — our system is proven to be more effective at reducing misfires, misruns, mishaps and eliminating accidents, ensuring the highest possible safety and completion success. That is why DynaSelect™ is verified by third-party laboratories, and recognized by service and oil and gas companies worldwide as the safest and most reliable in the industry. The DynaSelect™ System includes the Infinity Firing Panel, Infinity Surface Tester, and features the world's first and only fully integrated switch-detonator.

GROUNDBREAKING PERFORMANCE

DynaSelect™ is engineered to increase productivity and guarantee the highest levels of perforating accuracy, delivering unrivaled reductions in rig time and completion costs. The innovative system design improves gun-loading efficiency and allows rig-up, running in hole and rig-down without radio silence or interrupting wellsite operations. Unlike traditional plug-n-perf and other selective-fire equipment, the system permits easy verification of initiator functionality, reducing the chance of a misrun. With the ability to test system wiring and identify communication problems at the earliest stage of the process, misfires are reduced.

Significantly Safer

The DynaSelect™ system can prevent a catastrophic surface detonation of a perforating gun, avoiding risks posed by conventional methods and other switch-detonator combinations. DynaSelect's integrated switch-detonator requires a series of specific digital codes to initiate, preventing any other energy sources from unintentionally initiating the detonator or igniter.

Protected from:	DynaSelect™	Conventional EB switch when used with a resistorized detonator	Conventional switch-resistorized detonator combinations
RF Energy	Yes, always	No	Yes, if wired correctly
Stray and direct voltage and current	Yes, 100% safe. Cannot be energized by AC or DC electrical power, a cathodic protection system, or by any type of battery, induced power or static electricity.	No	Yes, if wired correctly Single-point failure potential
Megger tests	Yes, 100% safe. Lives have been saved using the DynaSelect system when accidental Megger tests were conducted and no unintentional initiation occurred.	No	Yes, if wired correctly Single-point failure potential
Indirect lightning strikes or another supplier's hardware or equipment	Yes, always	No	Yes, if wired correctly Single-point failure potential
API RP 67 requirements	Exceeds	Meets minimum	Meets minimum

More Efficient

- Electrical wiring connections are reduced from 5 to 3, increasing wiring efficiency and decreasing the chance of human error by 40%.
- Setting tool and guns can be quickly tested on the surface, when run in hole and between shots, enabling potential errors to be detected earlier.
- Skip-over capabilities for individual guns, ensuring every stage has the highest chance of being perforated for maximum productivity.
- Supporting software and help files are less complex, facilitating easier training.

Reduced Risk

- Based on hundreds of thousands of runs, DynaSelect™ is proven to greatly reduce the chance of a gun or bridge plug misfire compared to traditional plug-n-perf methods. By preventing or minimizing nonproductive time to perforation and hydraulic fracturing activities at the wellsite, millions in operating losses have been avoided.
- All DynaSelect integrated switch-detonators must pass X-ray quality assurance, significantly reducing the chance of lost time due to a manufacturer's defect.

PLUG-N-PERF OPTIMIZED



INTEGRATED SWITCH-DETONATOR

Unmatched protection of people and operations results from an intrinsically safe integrated switch-detonator that will not initiate without a series of digitally coded signals.



GUN STRING

Typical Plug-n-Perf string with two guns and a composite bridge plug separated by Tandem Isolation Subs.



INTEGRATED SWITCH-DETONATOR INSIDE TANDEM ISOLATION SUB

With only three connections, the chances of a wiring fault are reduced. The large window in the sub allows for easy access and electric before ballistic arming.



INFINITY FIRING PANEL

The Infinity Firing Panel can be used stand-alone or controlled by software. In both cases it is as easy to use as a smartphone app. The highly intuitive setup allows the gun string to be safely tested and verified while running in hole. Any potential errors are detected early and can be rectified with minimum downtime.



INFINITY SURFACE TESTER

By safely checking perforating guns, including the detonator the Infinity Surface Tester greatly reduces the chance of lost time, misruns and misfires due to a wiring fault. The Infinity Surface Tester is fully RP67 compliant and cannot initiate any type of detonator or explosive device.



Independent Safety Test Results

- Static electricity tested safe to 2500 pF 30,000 V.
- Safely tested at 120 VDC.
- Surge tested to 6600 V and 2500 A.
- RF safe at 10 kHz, 300 V/m to 4 GHz, 200 V/m.
- Fluid desensitized after 2 min. in water.
- Impact tested to 70 Joule.
- Exceeds API RP67 standards for electrical and operational safety.
- The integrated switch-detonator is designed to be fail safe under excessive current or voltage.

Specifications

- Up to 20 guns and one setting tool per run with DynaSelect and Multitronic IV Firing Panel.
- Up to 40 guns and one setting tool per run with DynaSelect XT and Infinity Firing Panel.
- Standard DynaSelect 300°F/150°C for 1 hr -0015 SFDE.
- Premium DynaSelect 375°F/190°C for 1 hr -0019 SFDE.

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Compare the Impact of DynaEnergetics perforating systems against conventional options, and we guarantee that you'll see a measurable difference in performance, reliability and well productivity.

Contact us from anywhere on the globe at performance@dynaenergetics.com or visit us online at dynaenergetics.com, and we'll show you how.
