



Nonexplosive Setting Tool

Weatherford's nonexplosive setting tool (NEST) is a battery-operated, timer-based device that enables downhole tools to be set without the use of explosives. The NEST displaces conventional gas-generating setting tools that rely on explosives as a means of generating the required force. The NEST eliminates the hazards associated with the handling and storing of explosives.

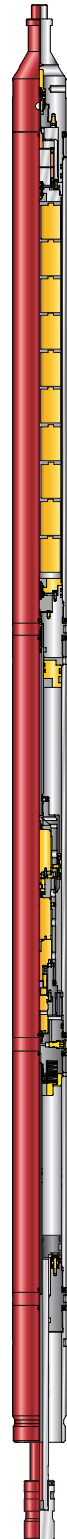
NEST is run on slickline, and the operator can select various timer settings depending on the depth at which the tools are to be deployed. The timer is activated by hydraulic pressure while the NEST is being run in the well. Pressure testing of the lubricator does not affect the timer. If the tools are recovered into the lubricator, the timer is reset. The NEST can be easily converted to enable deployment on e-line.

Applications

- Setting bridge plugs and packers of all kinds, both permanent and retrievable

Features, Advantages and Benefits

- The NEST contains no explosives, avoiding the issues and costs commonly associated with the handling, storing, importing, and exporting of such materials.
- Prior to running in the wellbore, the NEST can be fully tested at the surface to verify functionality and determine that sufficient battery power exists to complete the run, reducing the potential for a miss-run and avoiding nonproductive time.
- Unlike explosive tools, the NEST does not produce any noxious gasses that the person redressing it would be exposed to, enhancing worker safety at the jobsite.
- The tool provides confirmation of correct setting, either instantly with e-line or on surface with slick-line, ensuring operational efficiency.
- The thread connections at the lower end of the tool comply with the standards adopted for all such setting tools and is compatible with existing adapter kits, improving operational flexibility.





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Specifications

Size (in./mm)	2.250 57.15	3.600 91.44
Fish neck (in./mm)	1.740 44.19	
Length (in./mm)	117.00 2971.80	97.90 2489.66
Thread up	1.060-in. 10 TPI UN Pin	
Outer thread down	2.000-in. 10 TPI stub acme pin	3.500-in. 6 TPI regular acme pin
Inner thread down	0.688-in. 16 TPI UN box	2.000-in. 6 TPI regular acme pin
Weight (lb/kg)	83 37.64	181 82.10
Base material	AISI 4145	
Elastomers	Viton®	
Class of service	Standard	
Maximum number of runs with alkaline battery pack	10	5
Maximum number of runs with lithium battery pack	N/A	10
Timer positions	1, 2, 4, or 6 hr	
Hydraulic fluid type	Castrol Brayco® Micronic LV200	
Pressure rating (psi/MPa)	10,000 68.9	
Temperature (°F/°C)	32 to 275 0 to 135	
Tensile rating (lb/kg)	67,635 30,678	
Maximum generated setting force (lbf/kN)	30,000 133.4	60,000 266.9
Maximum stroke (in./mm)	10 254	

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