## **Firing Devices**



## Pyrotechnic Delay Firing Device

The  $1^{11}/16$ " Pyrotechnic Delay Firing Device is designed for use with all Expro gun systems ranging in size from  $1^{9}/16$ " through 7".

It is used when a specific delay time is required between pressurisation of the tubing and gun detonation. The device is available in 10-, 20-, and 30-minute delay units. It is also available with a 1.315 NU 10 RD Pin Up, making it readily adaptable to coil tubing or snubbing operations.

## Features and Benefits:

Standardised; one simple design for all gun sizes

Extremely safe

Ideal for overbalanced or underbalanced perforating

Well-suited for highly-deviated completions

Delay time easily increased in 10-minute increments

	Specifications:			
	Tubing Thread	1.315 NU 10RD API pin up	N/A	
	Length			
	10-min	28.3" (0.72 m)	26.50" (0.67 m)	
	20-min	43.0" (1.09 m)	41.19" (1.05 m)	
	30-min	57.7" (1.47 m)	55.88" (1.42 m)	
	Diameter	1.69" (43 mm)	1.69" (43 mm)	
	Working Pressure 15,000 psi (103.42 Mpa) at 350°F/175°C		=/175°C	
& Temperature 10,000 psi (68.95 Mpa) a		10,000 psi (68.95 Mpa) at 375°F/	t 375°F/190°C	
Pressure Rating				
	Collapse	20,000 PSI	20,000 PSI	
	Differential	15,000 PSI	N/A	
	Seal Rating	10,000 PSI standard	10,000 PSI standard	
		20,000 PSI high-temp.	20,000 PSI high-temp.	
	Tensile Strength	70,000 lbs.*	70,000 lbs.*	

\* When used on guns 2<sup>1</sup>/<sub>2</sub>" and larger, the tensile load is carried by the 2<sup>3</sup>/<sub>8</sub>" or 2<sup>7</sup>/<sub>8</sub>" API tubing sub that houses the assembly.



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