



1.75" Pyrotechnic Delay Firing Head

The 1-3/4" Pyrotechnic Delay Firing Head provides a detonation system for TCP applications requiring hydraulic pressure to fire the guns. This firing head assembly is designed for well conditions that are not suitable for detonating bars.

The firing head uses precision shear pins to provide a desired actuating pressure ($\pm 5\%$) for a perforating assembly. An appropriate actuating pressure will be a function of hydrostatic pressure, auxiliary pressure actuated tools, casing pressure limits, and a safety factor. All pressure constraints and variables must be considered when determining an appropriate actuating pressure. When actuated, the firing head initiates a 1" CAD pyrotechnic delay fuse. The fuse provides a 6-minute delay before detonating the gun system.

FEATURES/BENEFITS

- Minimum pinning requirement of *4,875 psi.
- Cannot be detonated at surface without applying pressure.
- Must apply the required pressure at the tool to actuate firing heads.
- Ideal for vertical, deviated and horizontal wells.
- Can be run on top or bottom of GEODynamics TCP guns.
- Can be used to detonate multiple gun systems.
- Can be used on work string, coiled tubing, and sucker rod conveyance methods.
- Can be used to actuate perforating assemblies, setting tools, and cutters.
- Not affected by electrical sources or radio frequencies - radio silence not required.

**Minimum of five (5) pins required to survive drop test.*

1.75" Pyrotechnic Delay Firing Head

SPECIFICATIONS

| Assembly P/N | TC-FHPD-17-A100 | TC-FHPD-17-A2500 |
|---------------------------|---|-------------------------|
| Firing Head Type | Pressure-Actuated | |
| Outside Diameter | 1.75 in / 44.5 mm | |
| Overall Length | 25.64" / 65.13 cm | |
| Min. Operating Pressure | *4,875 psi / 33.61 MPa | |
| Max. Operating Pressure | 20,000 psi / 137.90 MPa | 25,000 psi / 172.37 MPa |
| Collapse Pressure | 20,000 psi / 137.90 MPa | 25,000 psi / 172.37 MPa |
| Shear Pin Value | 975 psi / 6.72 MPa (@ 70°F) | |
| Delay Time | Six (6) -minute pyrotechnic delay | |
| Tensile Strength | 50,000 lbs min. or API Handling Sub | |
| Seal Ratings | <ul style="list-style-type: none"> • 10,000 psi @ 290°F without Back-up Rings • 20,000 psi @ 375°F with PEEK Back-up Rings for -A100 • 25,000 psi @ 375°F with PEEK Back-up Rings for -A2500 | |
| Tubing Thread Connections | 1-9/16" Gun Box (Downhole) 1.315 NU10 RD Pin up available | |

* Minimum of five (5) pins required to survive drop test.

