Schlumberger

3.12-in Frac Gun

APPLICATIONS

- Wells requiring fracture stimulation
- Sand control operations
- CBM wells

BENEFITS

- Optimized frac jobs and maximized production from the flexibility of using customdesigned charges in different guns or intervals
- Increased safety from real-time communication
- One-trip time savings of the plug and shoot adapter for setting a plug and shooting multiple guns on the same descent

FEATURES

- Multiple gun lengths from 1 to 20 ft in intervals of 20 in with up to 40 guns in a single descent
- Real-time communication to the surface via addressable switches
- 6 shots per foot (spf) and 60° phasing to accommodate a broad range of formation fracture orientation
- Adapters for gun connections to multiple types of cable heads and setting tools
- Operations in liquid at 15,000 psi and 300 degF for 1 h

	Head
•	Casing collar locator
	Gun adapter
	Frac Gun carrier
	Selective adapter
	Plug and shoot adapter
	Setting tool
	Plug
	Bottom nose

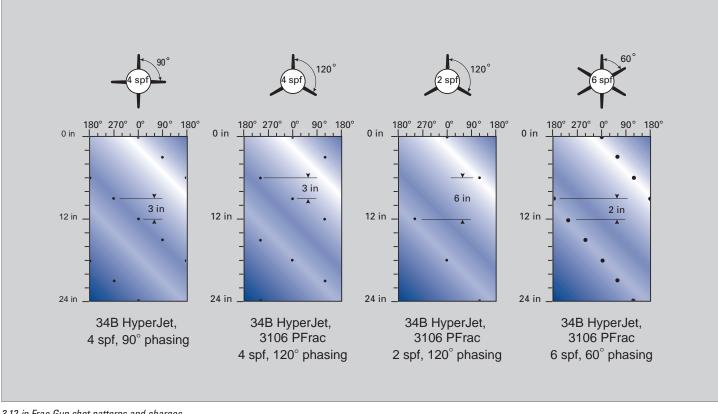
3.12-in Frac Gun perforating system with optional plug and shoot adapter.

The 3.12-in Frac Gun* perforating system is engineered for wells requiring fracture stimulation, sand control operations, and coalbed methane (CBM) wells. Because gun and charge performance in the downhole environment is critical to the success of well completion, the 3.12-in Frac Gun system is qualified to API Recommended Practice (RP) 19B Section 1 industry standards for verifying gun system penetration and casing entrance hole size.

Fracture stimulation requires 60° (or 120°) phased guns that produce a large entrance hole size. The 3.12-in Frac Gun system uses customdesigned charges to further optimize entrance hole size and penetration.

The guns are conveyed with wireline or slickline. A plug and shoot adapter makes it possible to set a plug and shoot multiple guns in the same descent, saving operating time. Rated to 15,000-psi pressure, the 3.12-in Frac Gun operates in temperatures up to 300 degF [149 degC] for 1 h.

3.12-in Frac Gun



3.12-in Frac Gun shot patterns and charges.

3.12-in Frac Gun Performance

Charge	Explosive Type, Max. Weight, g	Shot Density, spf, Phasing, °	Penetration, in [cm]	Entrance Hole, in [mm]	Burr Average, in [mm]	Temperature, degF [degC]	Target Strength, psi [kPa]	Test Date
3106 PFrac*	RDX, 22.5	6, 60	24.9 [63.3] †	0.44 [11.2] ⁺	0.06 [1.52]	300 [149]	6,355 [43,820]	08-2003
34B HyperJet*	RDX, 16.1	4, 120	18.5 [47.0] [‡]	0.41 [10.4]‡	0.07 [1.78]	300 [149]	5,528 [38,115]	11-1994

Bold blue type identifies API 19B Registered Perforation Systems.

[†] API RP 19B shot in 4½-in 11.6-lbm/ft L80 casing

 ‡ API RP 43 shot in 4½-in 11.6-lbm/ft L80 casing

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