PowerJet Omega
Deep Penetrating Shaped Charge

Schlumberger

HSD High Shot Density gun systems contain PowerJet Omega* deep-penetrating charges.*

Description

The PowerJet Omega deep penetrating shaped charge is the latest-generation shaped charge from Schlumberger and builds on the outstanding performance of the PowerJet* family of shaped charges. On the average, the PowerJet Omega shaped charge produces a 20 % increase in penetration depth compared with the performance of previous-generation shaped charges. Deeper penetration translates into increased well production and injection, coupled with improved well efficiency, which directly impact lifting costs.

The PowerJet Omega charge is currently available for 2-in to 7-in HSD gun systems. These gun systems can be conveyed by wireline, slickline, tubing-conveyed perforating (TCP), coiled tubing, tractors, and permanent completions.

The PowerJet Omega shaped charge can also be combined with underbalanced or dynamic underbalanced techniques, such as the PURE* perforating system.

Applications

- Production or injection wells
- Damaged formations
- Tight and hard rock
- All reservoir types
- All fluids (oil, water, gas)
- Reperforating old wells

Benefits

- Penetrates past formation damage, increasing well productivity or injectivity
- Maintains deep penetration at high shot density
- Intersects more natural fractures

Features

- Operates in liquid and gas according to the gun specifications
- Conveyable on wireline, slickline, TCP, coiled tubing, tractors, and permanent completions
- Compatible with all current wireline and TCP systems

American Petroleum Institute (API) Test Results										Weight, Fully Loaded		
Gun Size, cm [in]	**Charge**	**Explosive Type, Max. Weight, g**	**Shots Per Foot, Phasing**	**Penetration, cm [in]**	**Entrance Hole, cm [in]**	**Burr Average, cm [in]**	**Temperature Rating, 100-hr Operation, degC [degF]**	**Target Strength, kPa [psi]**	**Test Date**	**5-ft Gun, kg [lbm]**	**10-ft Gun, kg [lbm]**	**20-ft Gun, kg [lbm]**
5.08 [2.00]	PowerJet Omega 2006	HMX, 7.3	6, 60°	55.4 [21.8]	0.6 [0.22]	0.1 [0.05]	149 [300]	43,197 [6,265]	18-Aug-04	15.4 [34]	29.5 [65]	56.7 [125]
6.35 [2.50]	PowerJet Omega 2506	HMX, 12	6, 60°	77.7 [30.6]	0.8 [0.32]	0.1 [0.04]	149 [300]	46,900 [6,802]	25-Aug-04	27.2 [60]	47.6 [105]	89.3 [197]
7.31 [2.88]	PowerJet Omega 2906	HMX, 16.0	6, 60°	91.4 [36.0]	0.9 [0.34]	0.1 [0.05]	149 [300]	40,398 [5,859]	17-Aug-04	33.1 [73]	58.0 [128]	108.4 [239]
8.08 [3.18]	PowerJet Omega 3106	HMX, 20.0	6, 60°	93.7 [36.9]	0.9 [0.34]	0.15 [0.06]	149 [300]	42,467 [6,158]	5-Jul-05	42.2 [93]	75.3 [166]	132.4 [292]
8.89 [3.50]	PowerJet Omega 3506	HMX, 27.0	6, 72°	112.3 [44.2]	1.12 [0.44]	0.15 [0.08]	149 [300]	42,439 [6,155]	18-Aug-04	57.0 [125]	95.0 [210]	172.0 [378]
10.16 [4.00]	PowerJet Omega 4005	HMX, 38.8	5, 72°	131.3 [51.7]	1.22 [0.48]	0.18 [0.07]	149 [300]	41,811 [6,064]	1-Sep-04	63.0 [140]	106.0 [234]	191.0 [421]
11.43 [4.50]	PowerJet Omega 4505	HMX, 38.8	5, 72°	150.4 [59.2]	1.10 [0.43]	0.2 [0.08]	149 [300]	43,459 [6,303]	17-Jun-04	69.8 [154]	117.0 [258]	210.9 [465]
11.43 [4.50]	PowerJet Omega 4512	HMX, 21.9	12, 135°/45°	86.4 [34.0]	0.90 [0.35]	0.15 [0.06]	149 [300]	39,923 [5,789]	20-Sep-05	75.8 [167]	128.9 [284]	234.7 [517]
17.78 [7.00]	PowerJet Omega 4505	HMX, 38.8	12, 145°/35°	135.1 [53.2]	1.10 [0.43]	0.18 [0.07]	149 [300]	37,756 [5,476]	22-Aug-05	150.2 [331]	291.4 [642]	564.7 [1,245]

Note: A certified API tester has independently verified the shaped charge performance at the Schlumberger API test site in Rosharon Texas, USA. The API Perforation Design Registration Program data are available on the API Web Site (www.api.org) for direct comparison with other shaped charges produced by the service industry

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