

# PowerSpiral Retrievable Enerjet

## Description

The PowerSpiral\* system (available in 1<sup>11</sup>/<sub>16</sub>-in., 2<sup>1</sup>/<sub>8</sub>-in. and 2<sup>1</sup>/<sub>2</sub>-in. sizes) is a retrievable capsule perforating gun designed for through-tubing wireline operations. This system offers a technological breakthrough with a shock-absorbing material located between the charges. This material attenuates shock waves during the detonation, which reduces charge-to-charge interference, as well as minimizes shock waves in the wellbore. This is significant because it increases the performance of shots across the wellbore. With features like

multiple phasing, high shot densities, and the utilization of the PowerJet\* charges, the PowerSpiral system generates perforations capable of the highest well productivity in its size.

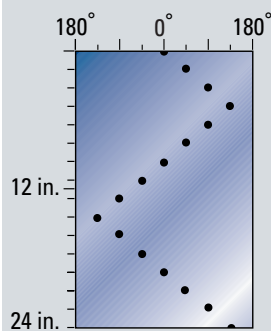
## Features

- Uses PowerJet technology.
- New charge design facilitates faster loading of the detonating cord.
- Rugged, low profile strip allows for shot verification and easy retrievability.
- Energy absorbing material virtually disappears after the gun detonates.

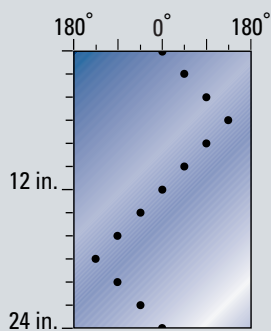
Ratings and Physical Data	1 <sup>11</sup> / <sub>16</sub> in.	2 <sup>1</sup> / <sub>8</sub> in.	2 <sup>1</sup> / <sub>2</sub> in.
Shot density	7.5 SPF	6 SPF	5 SPF
Phasing (°)	45 "pendulum"	45 "pendulum"	45 "pendulum"
Maximum gun length (ft)	30	30	30
Minimum restriction (in.)	1.78	2.25	2.62
Minimum pull strength of gun strip (lb)	8,000	12,000	18,000
Pressure rating (psi)	15,000	15,000	15,000
Debris fill per charge (4 <sup>1</sup> / <sub>2</sub> -in., 11.6 lb casing) (in.)	0.15	0.18	0.65
Debris fill per charge (5 <sup>1</sup> / <sub>2</sub> -in., 17.0 lb casing) (in.)	0.09	0.12	0.47
Debris fill per charge (7 in., 32.0 lb casing) (in.)	0.07	0.07	0.28
Temperature rating - HMX (°F)	365	365	365
Selectivity capability	No	No	No
A.P.I. witnessed RP 19B Section I penetration (in.)	19.5	27.2	36.6
A.P.I. witnessed RP 19B Section I entry hole (in.)	0.22	0.32	0.39



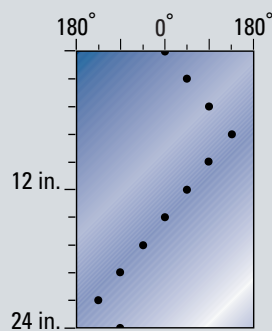
Shot pattern in 5<sup>1</sup>/<sub>2</sub>-in. casing



7.5 SPF, 45° Pendulum  
(for 1<sup>11</sup>/<sub>16</sub> in.)



6 SPF, 45° Pendulum  
(for 2<sup>1</sup>/<sub>8</sub> in.)



5 SPF, 45° Pendulum  
(for 2<sup>1</sup>/<sub>2</sub> in.)