

## 6 SPF (20 SPM) GUNFACTS®

|                               |   |
|-------------------------------|---|
| Gun Body Material:            | Heat treated, seamless steel tubing   |
| Gun Body Configuration:       | Bolted and scalloped, or threaded and scalloped                               |
| Charge Tube Type:             | Round steel tube  |
| Mode of Fire:                 | Simultaneous or selective firing systems such as EBFire® and ControlFire®     |
| Type of Tandem Connection:    | Booster-to-booster (no splice)  |
| Initiation Point:             | Top or bottom fired options available for wireline and TCP                    |
| Recommended Detonating Cord:  | 40 grains/foot, FLAT RIBBON   |
| O-Ring Material:              | Nitrile – 90 Durometer (Viton – 95 Durometer for temperatures >325°F [163°C]) |
| O-Ring Size for Bolted Gun:   | 0111-220-090 / 0111-220-V95   |
| O-Ring Size for Threaded Gun: | 0111-221-090 / 0111-221-V95   |

| Phasing  | 60°                                     |
|--|---|
| Assembly Part Number                                 | 1222-A**-066 <sup>‡</sup>               |
| Nominal O.D. (in)[mm]                                | 2.03 [52]                               |
| Nominal Thickness (in)[mm]                           | 0.21 [5.3]                              |
| Typical Gun Swell at Ambient Conditions (in)[mm]     |   |
| Ambient Liquid. 7.0g                                 | 2.18 [55]                               |
| Ambient Gas  | 2.22 [56.4]                             |
| Min. Recommended Restriction (in)[mm]                | 2.50 [63]                               |
| Drift Gauge O.D. for Gun Body I.D. (in)[mm]          | 1.58 [40] using Gauge Length 12in [305] |
| Min. Recommended Washover Pipe Clearance:            |   |
| Casing Drift I.D. to Nom. Washover O.D. (in)[mm]     | N/A                                     |
| Washover Drift I.D. to Nom. Gun O.D. (in)[mm]        | N/A                                     |
| Max. Hardware Temperature (°F)[°C]                   | 500 [260]                               |
| Max. Pressure (psi)[MPa]                             | 20,000 [138]                            |
| Min. Detonating Cord Velocity (ft/s)[m/s]            | 22,000 [6,700]                          |
| Typical Length (ft)[m]                               |   |
| 4 ft (18 shots)                                      | 3.75 [1.14]                             |
| 7 ft (36 shots)                                      | 6.75 [2.06]                             |
| 11 ft (60 shots)                                     | 10.75 [3.28]                            |
| 21 ft (120 shots)                                    | 20.75 [6.32]                            |
| Gun End to Center of First Scallop Distance (in)[mm] | 5.50 [140]                              |
| Approximate Weight Fully Loaded (lb/ft)[kg/m]        | 7.0 [10.4]                              |
| Max. Tension (lbf)[kN]                               | 135,000 [601] <sup>§</sup>              |
| Upper/Lower Head Connection                          | 1-11/16" - 8 Stub Acme <sup>§</sup>     |

<sup>†</sup> Wireline bolted gun      <sup>‡</sup> Threaded gun      <sup>§</sup> Threaded gun with booster-to-booster tandem transfer kit  
<sup>\*\*</sup> Gun length. Example: Use "07" for 7ft gun; etc.

## CIRCULATING CHARGE PERFORMANCE WITH 2IN, 6 SPF GUN SYSTEM | RECOMENED IN FLUID ONLY

| Charge Name | Charge Part Number <sup>†</sup> | Color Code               | Explosive Weight (g) | Shot Density (spf)[spm], Phasing | Entrance Hole (in)[mm] | L-80 Tubing/Casing Wall Thickness (in)[mm] | Penetration in Secondary String with 1/4" Water Clearance (in)[mm] |
|-------------|---------------------------------|--------------------------|----------------------|----------------------------------|------------------------|--|--|
| KoockOut    | CIR-2107-4T251                  | Brown with Green Stripe  | 7.0                  | 6 [20], 0°                       | 0.62 [16]              | 1/4 [6]                                    | 0.07 [1.78]  |
| KoockOut    | CIR-2107-4T381                  | Orange with Green Stripe | 7.0                  | 6 [20], 0°                       | 0.61 [16]              | 3/8 [10]                                   | 0.04 [1.02]  |
| KoockOut    | CIR-2107-4C501                  | Red with Green Stripe    | 7.0                  | 6 [20], 0°                       | 0.45 [11]              | 1/2 [13]                                   | 0.02 [0.51]  |
| KoockOut    | CIR-2107-4C631                  | Blue with Green Stripe   | 7.0                  | 6 [20], 0°                       | 0.35 [9]               | 5/8 [16]                                   | 0.05 [1.27]  |

## API PERFORMANCE OF CHARGES COMPATIBLE WITH 2IN, 6 SPF GUN SYSTEM

| Charge Name  | Charge Type | Charge Part Number <sup>†</sup> | Explosive Weight (g) | Gun O.D. (in)[mm] | Shot Density (spf)[spm], Phasing | Entrance Hole (in)[mm] | Penetration (in)[cm] | Burr Height (in)[cm] | Casing Size (in)[mm] | Target Strength (psi)[MPa] |
|--------------|-------------|---------------------------------|----------------------|-------------------|----------------------------------|------------------------|----------------------|----------------------|----------------------|----------------------------|
| PERFECTA     | SDP         | <b>RTG-2107-421T</b>            | <b>7.0</b>           | <b>2 [51]</b>     | <b>6 [20], 60°</b>               | <b>0.29 [7]</b>        | <b>26.07 [66.22]</b> | <b>0.05 [0.13]</b>   | <b>2-7/8 [73]</b>    | <b>7,650 [52.7]</b>        |
| Outlaw       | GH          | <i>RTG-2106-331</i>             | 6.5                  | 2 [51]            | 4 [13], 60°                      | 0.36 [9]               | 11.82 [30.02]        | 0.05 [0.13]          | 2-7/8 [73]           | 5,720 [39.4]               |
| BountyHunter | BH          | <i>FLO-2106-310</i>             | 6.5                  | 2 [51]            | 4 [13], 0°                       | 0.51 [13]              | 4.14 [10.52]         | 0.03 [0.08]          | 4-1/2 [114]          | 8,650 [59.6]               |

Note: All charges available with RDX, HMX and HNS. Table displays charges that have been API-19B or API RP-43 certified

**Bold indicates API-19B certification. Italics indicate API RP-43 certification**

<sup>†</sup> xxx-xxxx-3xxx for RDX, xxx-xxxx-4xxx for HMX, xxx-xxxx-5xxx for HNS