



## GENERAL PRODUCT SHEET

### Ball-Activated Fracturing Sleeve

#### PRODUCT DESCRIPTION:

The Ball-Activated Fracturing Sleeve (BFS) is a component of the multi-stage open hole fracturing system used as a means to establish direct communication between the liner/casing string and the formation. Multiple sleeves installed on the liner string are operated by releasing a specifically sized ball, which drops downhole from the surface to land on the corresponding ball seat. Pressure is then applied to shift the sleeve to the open position, allowing the formation to be fractured.

#### PROVIDE SOLUTIONS FOR:

- Horizontal open hole multi-stage hydraulic fracturing completions

#### FEATURES:

- Up to 35 Stages available
- The ball seat is rotationally locked in both open and closed positions
- The lock-open feature is engaged immediately after the sleeve opens
- Full liner/casing string ID is restored after the ball seat is milled
- The composite ball material ensures high-impact resistance and high differential pressure capability
- Dissolvable ball material available
- Optimized ball/seat bearing areas

#### BENEFITS:

- Screen-out recovery in the lock-closed position for milling, without risk of prematurely opening the sleeve
- Allows use of conventional cased hole tools after mill-out
- Fast and efficient milling operations with composite ball and cast-iron ball seat
- Operational flexibility during installation of system

#### TOOL SIZES:

| Casing Size<br>in. (mm) | OD<br>in. (mm)           | ID<br>in. (mm)           | Length<br>in. (mm)      | Pressure Rating   | Shear Pressure                          |
|-------------------------|--------------------------|--------------------------|-------------------------|-------------------|---|
| <b>4 1/2</b><br>(114.3) | <b>5.62</b><br>(142.748) | <b>3.92</b><br>(99.568)  | <b>33.00</b><br>(838.2) | <b>10,000 psi</b> | <b>660 psi/screw</b><br><b>6 screws</b> |
| <b>5 1/2</b><br>(139.7) | <b>7.10</b><br>(180.34)  | <b>4.78</b><br>(121.412) | <b>33.00</b><br>(838.2) | <b>10,000 psi</b> | <b>660 psi/screw</b><br><b>6 screws</b> |

