



# DUAL ACTIVATED CIRC SUBS

NEXT GENERATION MILLING TECHNOLOGY

# DUAL-ACTING CIRCULATING SUB



As the name suggests, the Dual-Acting Circulating Sub has two important functions:

- Allows pressure relief by applying internal pressure on a Rupture Disc (Burst Disc) and overcoming the Rupture Discs burst value, which is pre-determined prior to running the tools in hole. This may be necessary if the flow path is restricted to the tools below, to create a secondary flow path so as to deploy a drop-ball.
- The second capability of the Circulating Sub is a ball-activated option in which a drop-ball can be deployed via fluid to a piston seat within the Circulating sub to shear a piston, opening up (3) large ports to the annulus allowing pump rates to exceed motor flow rates as well as isolating the flow path to all the tools below the Circulating Sub in the Bottom Hole Assembly.

### Design Features:

- Simple Redress at the Field Level
- (3) 3-/8" (9.5mm) Ports to Annulus for High Flow Rates
- Robust Design for Milling & Jarring Operations
- Various Pressure Values Available for Burst Disc Option
- 3/4" (0.750"/ 19.05mm) Drop Ball

### TECHNICAL SPECIFICATIONS

| TOOL OD         | TENSILE YIELD              | TORSIONAL YIELD | STANDARD DROP BALL SIZES | SHEAR SCREW PRESSURE VALUE | PRESSURE RATING        | STANDARD CONNECTIONS |
|-----------------|----------------------------|-----------------|--------------------------|----------------------------|------------------------|----------------------|
| 73mm/<br>2.875" | 93,750 daNs<br>210,000 lbf | 3,900 ft-lbs    | 0.750"                   | 1,595 PSI/ SHEAR SCREW     | 68.9 MPa<br>10,000 PSI | 2-3/8" PAC           |