

SLIDING SLEEVE BIG BORE SYSTEM

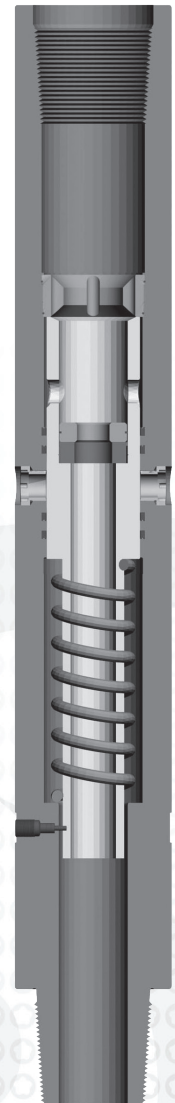
To answer the drilling industry's need for an efficient circulating sub that can be used in conjunction with retrievable MWD probes, BICO Drilling Tools introduces the Sliding Sleeve Big Bore (SSBB) system. This tool provides the same reliability associated with BICO's PBL® multiactivation Bypass System as well as the same industry proven functionality.

NEW FEATURES:

- Unlimited number of cycles
- Large ID provides the operator with the ability to deploy or retrieve probe style MWD sensors, drilling tools, or core barrels while still maintaining the ability to activate the SSBB tool

THE SSBB HAS THE SAME APPLICATIONS AS THE STANDARD PBL:

- Increasing circulation rates for improved hole cleaning resulting in reduced torque and drag, thereby increasing ROP
- Increasing annular velocity in highly deviated and horizontal wellbores where removal of cutting beds and hole cleaning are problematic
- Pumping all types of LCM materials, including aggressive materials and cement squeezes
- Fluid displacements
- Sub-sea riser/BOP jetting
- Acidizing and stimulation treatments
- Coring applications



TECHNICAL SPECIFICATIONS FOR SSBB SYSTEM

| Tool OD | ID Drift (in) ¹ | Port TFA (in ²) ² | Connections ³ | Number of Cycles |
|---------|----------------------------|--|--------------------------|------------------|
| 9 1/2 | 2.63 | 3.53 | 7 5/8 Reg | Unlimited |
| 8 1/4 | 2.63 | 3.53 | 6 5/8 Reg | Unlimited |
| 8 | 2.63 | 3.53 | 6 5/8 Reg | Unlimited |
| 6 3/4 | 2.24 | 2.45 | 4 1/2 IF | Unlimited |
| 6 1/2 | 2.24 | 2.45 | 4 1/2 IF | Unlimited |

¹ - Alternative Drift ID's available to accommodate drill pipe restrictions

² - Fullbore Port TFA listed

³ - Alternative connection may be available