

# SINGLE-ACTION BYPASS SUB (SABS)

## Specialized Tools: Circulating Tools

This tool makes it possible to boost the flow velocity in a casing string above a liner or casing crossover where a smaller liner exists.

### Applications

The SINGLE-ACTION BYPASS SUB (SABS) unit from M-I SWACO is used: to boost the flow velocity in a casing string above a liner or casing crossover where a smaller liner exists; to spot lost-circulation material or other pills, bypassing the motor or measurement-while-drilling tool; to boost flow in the annulus to remove cuttings beds; or to jet wellhead, blowout preventers or risers.

### How it works

Initially, the tool is run in hole with its ports in the closed position. To open the ports, a ball is dropped, and the pump rate is increased to circulate at higher annular velocity through the ports in the tool. To close the ports, a second ball is dropped, and pumping can be resumed through the string below the sub. Once dropped, both balls remain on seat at all times.

To have the option of reopening and then re-closing ports after the initial cycle, two SABS units can be run in tandem.

The SABS tool is used to boost flow velocity in a casing string above a liner or casing crossover.

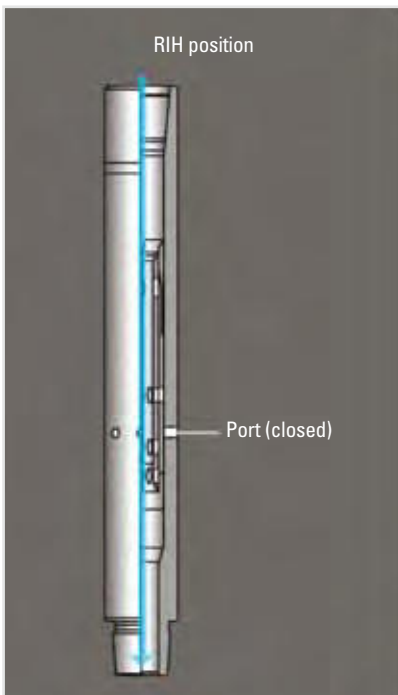


Figure 1. When desirable during the wellbore cleanup, a ball is dropped to a ball seat and pressure applied to open up the ports.

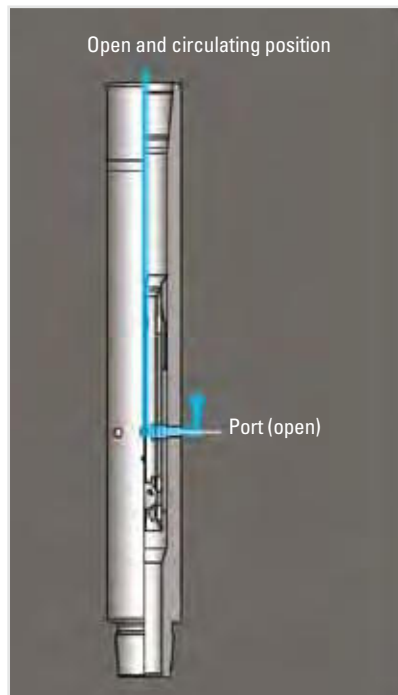


Figure 2. The pump rate can then be increased to circulate at increased annular velocity through the ports in the tool.



### Features

- One-piece, full-strength mandrel
- Balls retained on seats in tool

### Advantages

- When using the SABS tool to jet the riser, wellhead and/or BOP stack, the large, 11 to 16 in. (279 to 406 mm) OD sleeves allow the jets to clean closer to the profile
- To reopen and close ports after the initial cycle, two SABS units can be run in tandem