

SlipStream RC Pro (SRP) Operating Guidelines

What follows are general operating guidelines for SlipStream SRP products when drilling bridge and frac plugs for well completion. These are guidelines based on history with this product and what we have been able to observe at the well site. These are not hard and fast rules and your own operating practices should govern the use of the product.

- Always use care when tripping in the hole to prevent any damage to the bit or BHA. Minimize rotation if possible while tripping in the hole. It is OK to rotate when needed to move the BHA forward but rotation should be kept to a minimum.
- Drilling of bridge plugs and frac plugs is typically measured by time. Faster drill through times produce larger cuttings. Longer drill through times produce smaller cuttings.
- Recommended fluid flow rate should be between 100 to 150 GPM.
- Bit RPM should be between 200 and 300 RPM.
- WOB will vary with the types and age of the plugs being drilled and should be between 0 and 4 Klbs.
- Bridge and frac plugs can usually be drilled in 8 to 12 minutes with the production of small cuttings. See photos below of typical cutting sizes when plugs are time drilled at 8 to 12 minutes per plug.



SRP Cuttings



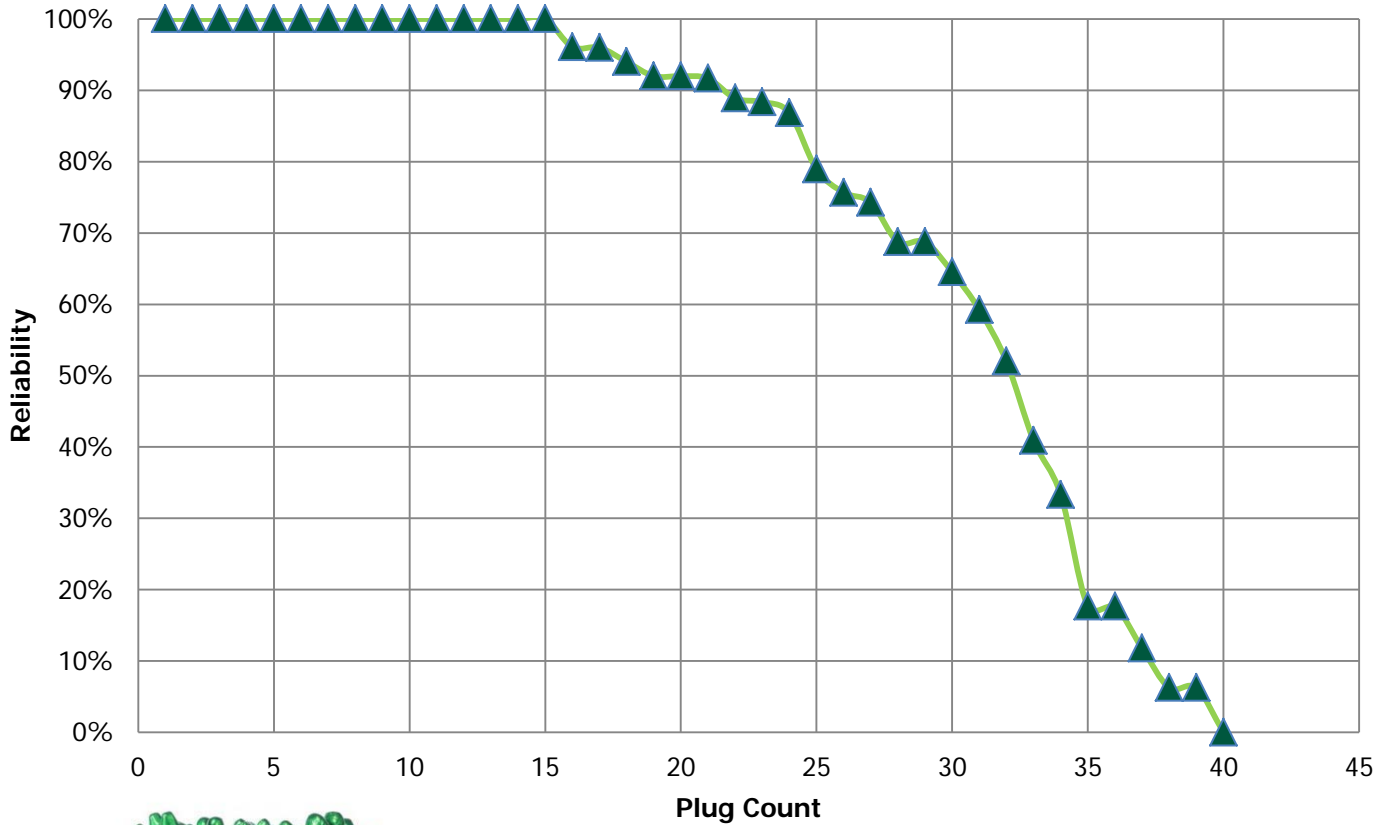
Competitor Cuttings

- Wash down cycle time between plugs should be between 10 to 20 minutes. This will allow additional cutting time for the plug just drilled and help to clear the cuttings before pushing the remains down to the next plug to begin drilling again.

SlipStream® RC Pro

- Bearing reliability of the SlipStream product versus the number of plugs drilled is shown below as a guideline. Your application may experience more or less reliability based on the operating parameters and plug types drilled.

Reliability of SlipStream



www.varelintl.com