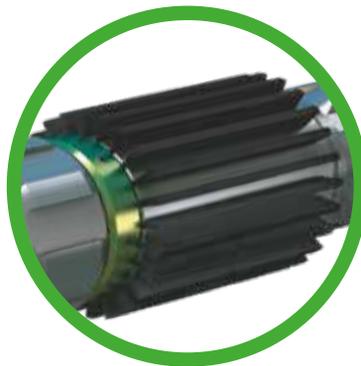


INTRODUCTION

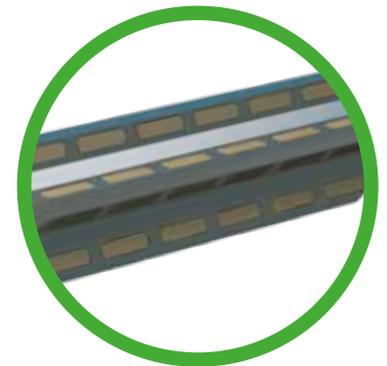
The Eco-Max™ is a comprehensive solution to improve completion deployment in a cost driven market. The tool consists of a scraper, brush and high capacity magnet elements integrated onto a completion deployed mandrel. The Eco-Max™ can be run as part of the permanent completion string and eliminates the need for a dedicated wellbore clean-up run.



Each Eco-Max™ includes a single piece caged scraper element with 360° overlapping blades which ensure 100% casing wall coverage. The scraper features self-cleaning teeth to remove cement, perforation burrs, scale and other potentially damaging debris from the casing.



Immediately behind the scraper are rows of brushes which scour corrosion pits and coupling recesses. The brush also acts as a barrier preventing debris from passing below the tool and interfering with the completion. The scraper and brush element complement each other and form a highly efficient dual cleaning mechanism.



Large bypass channels allow unhindered circulation rates to facilitate removal of debris. Rotation and reciprocation is possible but may be limited by the completion hardware. Magnets remove ferrous debris from the wellbore during cleaning. The magnets are arranged along ribs to maximize the exposure area available to trap debris while running out of hole.

APPLICATIONS

The Eco-Max™ can be configured for any Casing and Tubing combination with matching metallurgy and connections.

OPERATIONS

The Eco-Max™ can be run below the lowest packer and made up directly to the tubing string. While running in the hole it is possible to reciprocate the Eco-Max™ across each subsequent packer setting depth. If circulation or rotation is possible this can be done to maximize the cleaning efficiency. The scraper will remove any cement while the brush scours stubborn debris as well as acting as a debris barrier. The magnets capture any metal debris to protect the completion.

FEATURES

- Single piece mandrel complete with connections becomes an integral component of the completion.
- Scraper cage manufactured from single piece mandrel without the need for springs, bolts or pads.
- All components can be supplied with compatible metallurgy.
- Mandrel ID is matched to tubing ID to prevent restrictions.
- Available with any tubing connection to run directly on the completion tubing.

