



MetalSkin® Openhole Liner Expansion System

Sizes 9-5/8 × 11-3/4 in. and 11-3/4 × 13-3/8 in.

The Weatherford MetalSkin expansion system is used to run and set MetalSkin openhole liners, which provide additional additional casing string to permanently isolate specific wellbore sections while conserving hole size. The hydraulically driven expansion system consists of a safety joint, debris barrier, seal cups, and an expansion cone. The safety joint provides a mechanism that enables the inner string to connect to the launcher assembly. The debris barrier protects the expansion system from downhole debris to ensure proper functionality for liner expansion. The seal cups equalize pressure across the cone and provide a redundant seal for improved installation reliability. At the bottom of the running string, the solid-body cone features an optimized shape that eases liner expansion with lower overall expansion force and pressure.

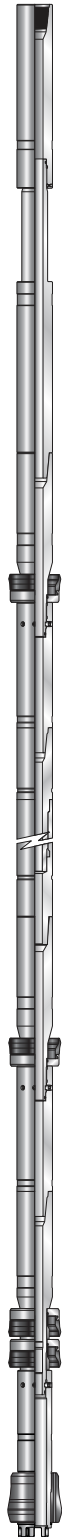
The expansion system is preinstalled in the MetalSkin openhole liner and run to the predetermined setting depth. If required, cement is pumped in the annulus between the wellbore and the expandable liner. A single dart, dual darts, or a ball is released and lands in the valve of the system, activating the expansion process. Hydraulic pressure across the valve forces the expansion cone to travel from the bottom of the assembly to the top, expanding the liner in the open hole and against the parent casing. After expanding the full liner length, the expansion system exits the top of the liner, and the valve of the liner can then be drilled out for continued well operations.

Applications

- Liners run with the MetalSkin openhole liner system

Features, Advantages, and Benefits

- The hydraulically driven system equalizes expansion pressure across the cone, reducing the required expansion pressure, thereby reducing the risk of flow erosion and contributing to system reliability.
- The redundant seal cups create a positive seal between the expansion system and the expandable liner for improved installation reliability.
- The solid-body cone ensures full-radial outside diameter (OD) contact of the expandable liner with the openhole section and with the parent casing above, providing a reliable seal.





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Features, Advantages, and Benefits (continued)

- The debris barrier protects the expansion system from downhole debris, ensuring the system performs reliably for proper liner expansion.
- The system enables the use of a single dart, dual darts, or a ball to create the primary pressure seal required to initiate expansion. The three options provide operational flexibility to meet various cementing requirements.
- The safety joint provides a safe latching mechanism that enables connecting the inner string to the launcher assembly, enabling the system to run to the predetermined setting depth for expansion.
- The expansion cone is housed in the launcher of the MetalSkin openhole liner system to reduce the risk of differential sticking and maximize the running clearance, reducing problems associated with equivalent circulation density (ECD).

Specifications

Contact an authorized Weatherford representative for further information.

Options

The system requires a seal with a single-dart, dual-dart, or ball mechanism to initiate expansion.