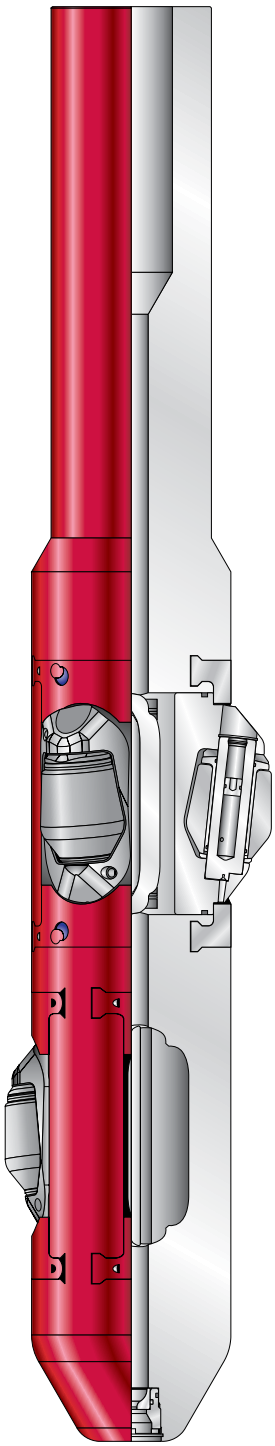
7-in. ESS™ Expansion Tool



Weatherford's compliant rotary expansion tool for *ESS* expandable sand screen joints expands slotted tubulars compliantly to the wellbore, providing support and effective sand control. The tool can be run individually or in conjunction with the 7-in. diverter tool and the compliant expansion tool for EZI™ expandable zonal isolation. This tool combination is used to complete multizone wells with Weatherford's 7-in. ERC™ expandable reservoir completion. The compliant roller assembly is activated by flowing through a bit nozzle to generate backpressure.

Features, Advantages and Benefits

- Six roller pistons extend and retract independently, fully expanding the *ESS* joint to maximize wellbore contact, even in irregular hole geometries.
- The rollers can collapse into the body of the tool, allowing it to pass through conventional casing before being activated to perform expansion operations. This capability facilitates *ERC* integration with conventional and intelligent upper completions.
- The top-down rotary expansion process allows retrieval of the tool from the wellbore at any point. This capability significantly reduces potential deployment risks.
- The tool is field redressable, saving time by minimizing maintenance requirements.
- Rollers and bearings are constructed from state-of the-art materials, ensuring maximum tool life.

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Specifications

ESS size (in./*mm*)	7.00 *177.8*
Minimum tool OD (rollers) (in./*mm*)	6.00 *152.0*
Maximum operating tool OD (in./*mm*)	8.30 *212.1*
Typical operating pressure (psi/*bar*)	900 to 1,200 *62.1 to 103.4*
Typical operating weight on bit (lb/*kg*)	15,000 to 20,000 *6,804 to 9,092*
Typical operating expansion torque (ft-lb/*N•m*)	2,500 to 3,000 *3,390 to 4,067*
Typical operating expansion speed (RPM)	50 to 100
Typical operating expansion rate of penetration (ft/min, *m/min*)	4.0 to 8.0 *1.2 to 2.4*

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