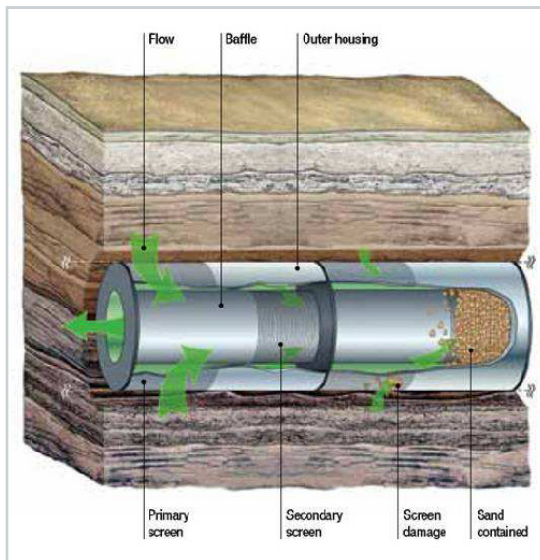




MazeFlo™ Self-Mitigating Screen Technology

Weatherford's *MazeFlo* self-mitigating screen technology is patented by ExxonMobil and jointly developed with Weatherford. *MazeFlo* technology increases the reliability in sand-control completions by incorporating a maze design to constrain local sand ingress caused by screen damage without interrupting well production.

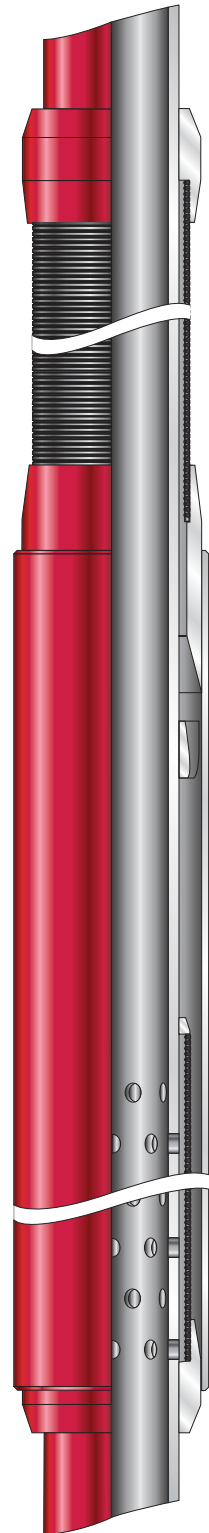


The screen contains a series of compartments along a selectively perforated base pipe. As shown in the illustration, each compartment contains a primary screen, flow baffles, outer housing, and a secondary screen. Produced fluids flow from the wellbore into the primary screen, between the primary screen and the nonperforated base pipe section, and then are redistributed by the flow baffles. The fluid, which now flows more uniformly, travels through the housing and into the secondary screen, then through the perforated base pipe, where it commingles with produced fluid from other compartments.

If the primary screen erodes, the sand flows into the housing compartment, accumulates on the secondary screen, and subsequently increases the resistance to flow in the problematic compartment. The produced fluid is then diverted to the adjacent undamaged screen compartments. This screen self-chokes production only at sand breakthrough locations, and this occurs automatically without the need for surveillance or a control system

Applications

- Remedial applications
- Openhole standalone completions
- Horizontal and extended-reach wells





MazeFlo™ Self-Mitigating Screen Technology

Features, Advantages and Benefits

- Patented self-mitigating sand-control screen compartments constrain local sand ingress, requiring no intervention to initiate sand-control mitigation.
- The number of compartments is 1 to 3, based on base-pipe joint length, increasing the reliability and flexibility of the design.
- Patented Ultra-Grip™ manufacturing process provides the same mechanical performance, greatly improving tensile, torque, and collapse strength.
- Heavy-duty surface wire provides greater erosion resistance, increasing mechanical strength and extending life in the most demanding environments.
- Precision-formed wire and high-precision slot tolerances provide optimal sand control, maximizing production.

Specifications

Base Pipe			Screen					
Size (in.)	Weight (lb/ft, kg/m)	ID (in./mm)	OD (in./mm)	Weight (lb/ft, kg/m)	Tensile Strength ¹ (lb/kg)	Maximum Bend Angle ² (°/100 ft/30 m)	Burst Resistance (psi/MPa)	Collapse Resistance (psi/MPa)
2-3/8	4.60 6.85	1.995 50.673	3.421 86.893	8.02 11.95	87,153 39 532	20	3,866.0 26.7	3,529.0 24.3

1. Screen tensile strength based on standard perforated base pipe.

2. Maximum bend angle for screen may exceed allowable bend angle for some threads. See manufacturer's specifications.



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