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FloMaster CS

FloMaster CS; Controlled downhole fluid flow for predictable casing cementing performance

Primary Function	*Downhole fluid-flow regulation during casing cementing*
Deployment	*Deployed within a Casing pup joint*
Mechanism	*Precision-engineered orifice modules (no moving parts)*
Outcomes	*Improved displacement, controlled ECD's, positive surface pressure*

Operating Principles:

FloMaster CS regulates annular flow during cementing by introducing a designed pressure drop across a series of precision orifice modules installed within the casing string.

- The modules restrict flow at a defined rate, preventing uncontrolled free-fall and excessive acceleration of fluids.
- Flow regulation occurs downhole, independent of surface pump control.
- The system produces a consistent and interpretable surface pressure signature, enabling improved execution confidence.
- The design contains no valves or moving components, reducing failure modes and operational risk.

Technical Highlights:

- **No moving parts:** Eliminates valve-related reliability issues and reduces mechanical complexity.
- **Predictable pressure behaviour:** Helps keep Equivalent Circulating Density (ECD) within planned limits.
- **Improved displacement conditions:** Promotes uniform annular flow and reduces channelling risk.
- **Robust, drillable design:** Can be drilled out using standard bits after cementing operations.
- **Customisable flow control:** Module number and configuration tailored to well conditions and pump rates.
- **Passive system:** Requires no activation, intervention, or real-time adjustment.

Typical Applications:

- Primary casing cementing
- Remedial cementing operations
- Wells with narrow pressure margins
- High-angle or extended-reach wells
- Loss-prone or sensitive formations
- Operations requiring high confidence in cement placement outcomes

Options & Configurations:

- Casing size, thread, weight, grade
- Planned pump rates
- Pressure limits
- Cement placement objectives