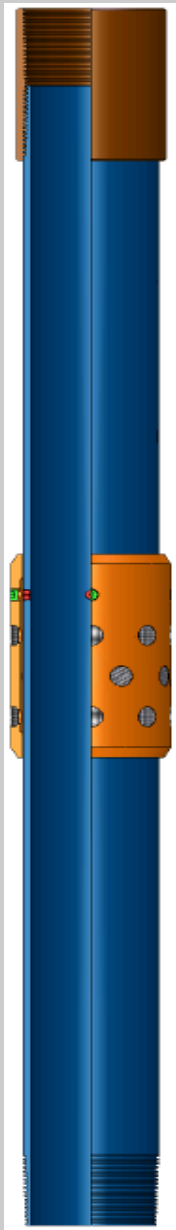


FloRite™ ICD Sub: 7.0”

Schlumberger

FloRite™ Screen Design



FloRite™ is a unique pressure profile control screen designed to optimize toe-to-heel flow control in consolidated formations, as well as remove formation damage caused by drilling and completion fluids/operations.

By strategically placing inflow control devices (ICDs) along the production zone, one can: a) sweep the well uniformly, b) prevent or delay gas/water coning, c) choke off unwanted high-perm water streaks, and d) remove filtercake damage via higher drawdowns. For injectors, ICDs can achieve uniform toe-to-heel gas/water/steam injection, and choke off thief zones.

FloRite™ uses nozzles for flow control, which are superior to channels because: 1) nozzles choke off water more effectively, and 2) pressure drop (hence flow rate) is independent of viscosity. The result: more oil production—less water production.

FloRite™ nozzle configuration can be changed at the wellsite to accommodate changes made to the planned well path (e.g., geo-steering) as well as new logging data.

FloRite™ nozzles come in several sizes and are made of tungsten carbide for enhanced erosion/corrosion resistance.

FloRite™ uniquely employs a short section of FacsRite™ sand control media. Some sand control is necessary to protect nozzles and downstream/surface equipment from random solids.

FloRite™ can be combined with packers to isolate problematic zones and minimize annular flow that could significantly reduce oil production and erode screens.

The most advanced wellbore/reservoir computer simulation models are available to quickly and accurately design the FloRite™ ICD strength for a specific application.

Applications

- Horizontal producers/injectors requiring pressure profile control, where formation is consolidated (i.e., no sand control required along full length of the wellbore)
- Vertical wells with commingled zones of different pressure.
- Thermal wells that require uniform toe-to-heel steam injection
- In combination with external/swell packers to isolate harmful zones and minimize annular flow

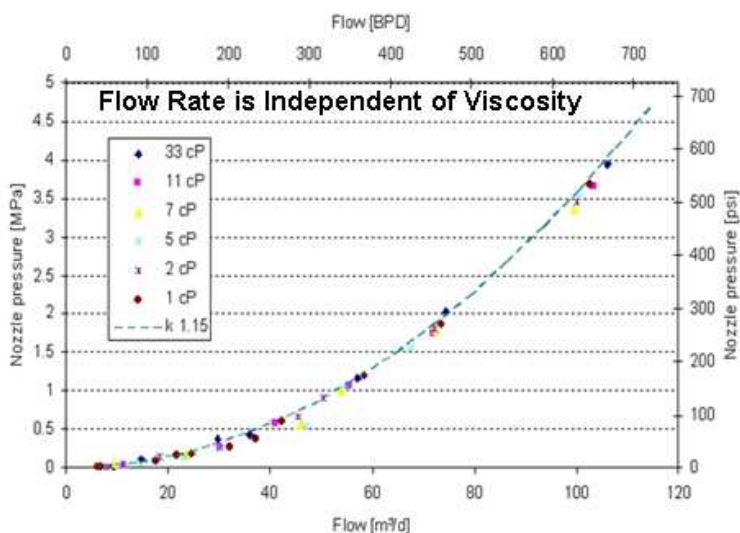
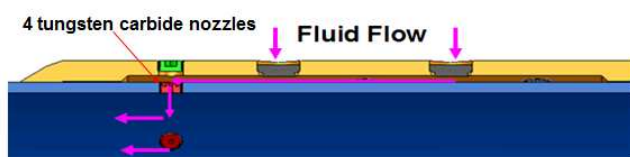
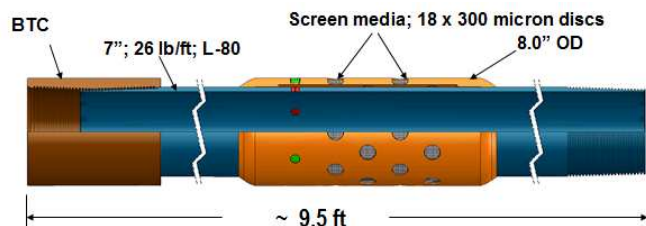
Benefits

- Provides uniform toe-to-heel productivity sweep of reservoir
- Delays onset of water/gas/steam coning
- Cleans up formation damage
- Allows harmful zones to be easily choked off (water) or isolated (shale)
- Increased reserve recovery for higher NPV
- FacsRite Premium disc media protects the nozzles and upstream equipment from random particles
- Designed for severe installation and operational conditions
- Unlike channel-based ICDs, pressure drop is independent of viscosity
- ICD strength adjustable at the wellsite

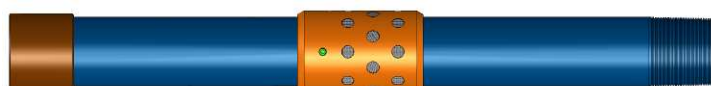
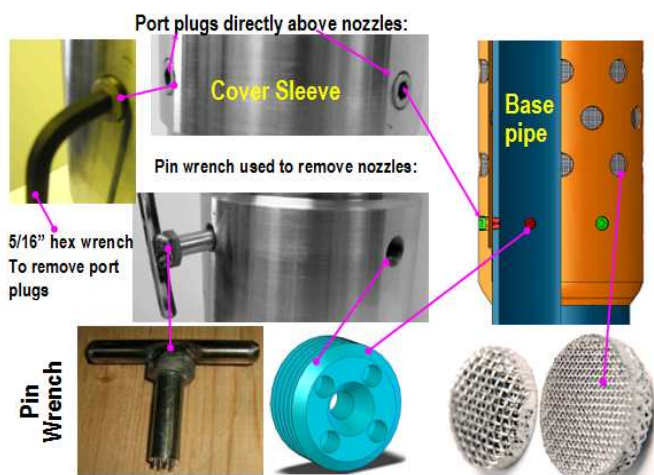
Features

- Patented FacsRite™ Premium (Fusion Bonded Mesh Laminates) outer screen protection from random solids
- Nozzle-based ICDs for optimum flow control and viscosity independence
- High open flow area media with large flow area between media and base pipe to prevent erosion and unwanted pressure losses





How FluxRite On-Site Removable Nozzles Work



| FloRite™ 7" ICD Sub | |
|---|--|
| 7" base pipe with 300 micron FacsRite Premium Discs | |
| SCREEN MEDIA | |
| Construction Material | 316L |
| Micron Rating | 300 micron |
| Screen length | 1.0 ft. |
| Screen Burst Rating | 1500 psi |
| BASE PIPE | |
| Size, Wt./Ft. | 7" 26# |
| Joint Length | 9 ft. |
| Blank Sections (ft) | 3.75" |
| Inflow Area (in ²) | 11 |
| Connections | BTC |
| ASSEMBLY 7" | |
| Outer Jacket OD | 8.0" |
| Coupling OD | 7.39" |
| Pipe ID | 6.366" |
| Collapse Rating | 6812 psi |
| Pipe Burst Strength | 7192 psi |
| Pipe Body Tensile (Yield) | 520,800 lbs (L80) |
| Pipe Body Torque | 78,800 ft-lbs |
| Maximum Bend Radius | 45 degs/100 ft |
| ICD ASSEMBLY SPECS | |
| FacsRite Cover Sleeve: Length/OD | 18"/8.0" |
| Nozzles | 4 max |
| Nozzles size | 4.0 mm, 2.5 mm, 1.6 mm |
| Nozzle Material | Tungsten Carbide with titanium nitride coating |

