UniFlo™ HELICAL Inflow Control Technology

Superior Completions Services’ UniFlo™ Production/Injection Control Well Screens balance and distribute the flow of fluid along horizontal wellbores. This screen system includes an integral helical design inflow control device (ICD). In producing wells, drawdown pressure is distributed along the wellbore length to achieve balanced production. In injection wells, the injection pressure is distributed along the wellbore to achieve balanced injection.

Fluid flow distribution is achieved by creating flow resistance at selected locations along the wellbore. Since energy is conserved in closed systems, reducing the flowing kinetic energy at one location can increase the potential energy at another location. The UniFlo™ System can utilize orifice and nozzle designs, labyrinth designs, long channel designs and combinations of the various methods to create this resistance in both fixed and adjustable configurations.

In applications requiring sand control, the screens are configured to retain either the formation material or the gravel pack sand. In more competent rock applications, the screens are configured as debris filters.

Superior Completion Services can provide custom designs according to the precise needs of the application. This is accomplished with an in-house design tool that considers the fluid properties, flowing properties, required size, required pressure setting and flow velocities. Since these ICD’s are designed precisely, accuracy of the application is not jeopardized by having to best-fit a limited number of ICD designs to the well.

APPLICATIONS
- Sand control
- Horizontal wellbores; producing and injection wells
- High-rate gas wells to reduce heading due to water encroachment, passive choking of the water
- Oil viscosities ≤ 2cP
UniFlo™ HELICAL
Inflow Control Technology

Features and Benefits

- Can be manufactured with direct-wrap jackets or with premium mesh filtration cartridges offering customization
- Uniform production/injection by reducing inflow at the heel and increasing inflow at the toe by resistance to flow of fluids passing through the long channels of the Helix
- Prevention of early water and/or gas breakthrough is accomplished by equalizing the influx of fluids along the well-bores lateral length
- Increase in ultimate total recovery
- Uniform injectivity via resistance to injection by the Helical design delivering equalized out flow of fluids from tubular to well-bore

TECHNICAL DATA

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<th>Base Pipe OD (inch)</th>
<th>mm</th>
<th>lb/ft</th>
<th>kg/m</th>
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REFERENCES

Wire-wrapped and premium well screens brochure