



Mechanical sealing solutions for water shut off & zonal isolation

Water Management

For many producing wells water management poses an increasing cost, risk and HSE burden over their life. Water cut in the production system must be extracted, separated, treated and disposed of according to legislative standards, so as useful production declines and water cut increases, so too does this burden. Compounding this escalating negative impact is the increasing likelihood of scale formation and corrosion in the well, thereby increasing the need for costly remedial intervention and associated non-productive downtime.

Tackling the issue close to source, using preventative isolation methods in the well can be highly effective in extending productive life and minimising water management cost and risk. Depending on the lifecycle stage of the well and its architecture, options include mechanical and/or chemical/polymer sealing solutions and cement squeezes.

DTI's wide range of mechanical sealing solutions offer the following advantages:

- **Highly targeted**
- **Simple and fast to deploy**
- **Permanent or retrievable depending on the application**
- **Suitable for a range of pressures and temperatures**
- **Suitable for liquid or gas isolation**
- **Sized for different wellbore, tubing and annular diameters**
- **Can be specified with resilient materials for use in sour and corrosive environments**

PKB Bridge Plug & Packoff

The PKB bridge plug meets the need for a low-cost, easy to run plug in 2- $\frac{3}{8}$ " to 4- $\frac{1}{2}$ " completions with a 5000 psi maximum working pressure. It is designed to be run and set on slickline without any special setting tools and run and pulled using standard GS pulling tools.

It is typically supplied with melon or prong type equalising devices however it is adaptable and can be used as a gauge hanger, standing valve or injection valve. The bridge plug has also been adapted to be used as a packoff as part of a straddle sleeve and for gas lift systems.



Inter-Expansion Plug & Packoff

Our Inter-Expansion (IX) range of downhole sealing solutions are the latest addition to our range of plugs and packers and were introduced to meet industry demand.

The IX range fills a gap between the PKB sealing solution and the UHX sealing solution. They are rated to 7,500 psi working pressure and are API 11D V3 rated. They have been designed with an excellent working pressure rating to ID ratio with straddle sleeves in mind.

The IX Plugs can be run and set on slickline/e-line using a powered setting tool or on coiled tubing using a hydraulic setting tool.

The current range for IX plugs and packers is from 2 3/8" tubing through to 7" tubing.



Ultra-High Expansion: M-Bubble Bridge Plug & UHX Packer

DTI's Ultra-High Expansion (UHX) Packers and M-Bubble Plugs incorporate an additive manufactured expanding metal element. They offer the industry an unrivalled combination of high expansion (up to 300%), pressure rating and temperature rating and have built an excellent track record in the field.

These products have the strength and durability for serious high-pressure sealing and can isolate pressured and flowing zones in a fast and cost-effective single run. They are typically used in applications where the tool is required to pass through the completion string and set and seal in the larger diameter casing or liner below. As well as being suitable for water shut off the UHX Plugs can also be used for zonal isolation, plug and abandonment and in CCUS applications.

A standard UHX M-Bubble is designed for 2-1/8" OD tools and will set and seal in up to a 6-5/8" casing/liner. 2-3/8" OD tools will set and seal in up to a 7" casing/liner. Multiple other sizes, temperatures and pressure variants are in development.





Technology innovation with quality and reliability at the core.

DTI is a specialist in innovative downhole technology for the global energy industry. We design and manufacture tools to solve current and emerging challenges for the oil and gas, gas storage, CCUS, hydrogen storage and geothermal production sectors.

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