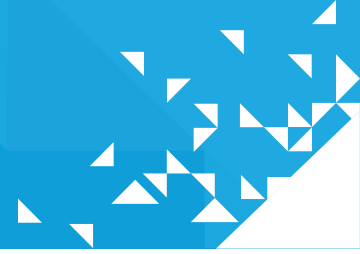


Combo Tool

Inflatable Packer Isolation & Stage Cementing



The Innovex Combo Tool achieves more reliable operation and cement placement for reduced risk and remediation costs when running and cementing casing. Specially engineered features improve slurry placement with a single tool that combines an inflatable packer for zonal isolation with a stage-cementing tool. Over-displacement is eliminated when landing the first stage cementing plug to inflate the ICP element. A separate free-fall plug ensures the plug is landed without displacing mud into the shoe track and compromising isolation integrity with a wet shoe.

The Combo Tool also features an internal sleeve design that eliminates premature inflation when washing down the casing to reach TD.

Elimination of over-displacement and premature inflation, along with other performance enhancements, significantly reduces the risk and costs of poor cement placement for improved zonal isolation.

AVOID DISPLACEMENT UNCERTAINTY

Over-displacement or wiper plug failure resulting in placement of mud around the shoe can significantly compromise isolation integrity and add to costs. This typically occurs due to differences between calculated and actual displacement volume for a standard top wiper plug, and/or failure of the plug itself.

With our Combo Tool there is no need to over-displace to land the cement plug, so associated problems are avoided and cement job reliability is enhanced.

Both the inflatable packer and stage tool are activated with a separate free-fall plug landed on a sleeve in the tool. Applying hydraulic pressure inflates the packer first, allowing it to fully inflate. At a predetermined pressure set to prevent over inflation, a hydraulic sleeve is activated to open the stage tool and allow circulation to initiate the cement job.

OPTIMAL ISOLATION SOLUTIONS

- Four pressure-control settings on the stage tool prevent over-pressuring and rupturing the element when inflating with cement, mud, or water. Managing pressure is important in washed-out hole to avoid element overexpansion.
- Combining the tools places the inflatable element and cementing ports closer together to improve cement coverage when compared to a conventional two-tool assembly. Trapping fluid behind the pipe between the element and stage tool ports is also reduced or eliminated, which is a particular advantage in geothermal applications. Initiate the cement job.
- The tool is rated to the full casing burst and collapse rating of the casing.
- Drillout integrity is ensured with the use of a one-piece mandrel for heavier casing weights and a two-piece mandrel for lighter casing weights.
- The Combo Tool is versatile to match your applications. It is available for 9.63-in and 13.38-in. casing with standard 11.25-in. and 15.25-in. tools OD respectively. Custom OD tools are also available.
- Options include a 4 ft long continuous ribbed element for inside casing or gauge wellbores, and 10 ft discontinuous ribbed element for washed out or irregular open hole.



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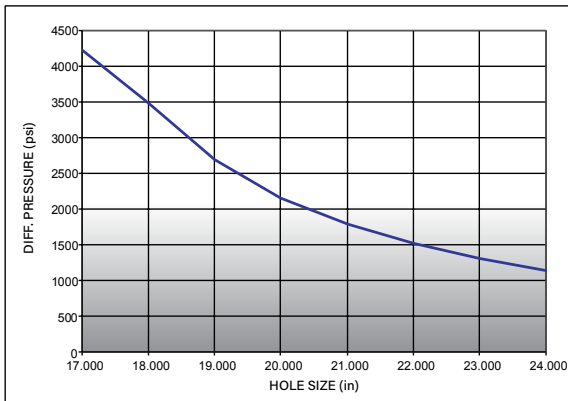
PREVENT PREMATURE INFLATION

The Combo Tool's internal sleeve design eliminates concerns about prematurely inflating the packer when washing down casing to reach TD. High-pressure fluctuations frequently experienced during this process can compromise the performance of standard ICPs. These tools typically use knock off rods to cover the inflation ports. When the ICP is used with a stage tool, the rods are removed due to concern that the smaller first-stage shut off plug will not remove the rods to allow access to the ICP inflation ports. Doing this leaves the packer ports open to premature inflation if high circulating pressures are encountered during the wash down process. The Combo Tool's internal sleeve design does not use knockoff rods. Inflation occurs only when the plug is dropped and hydraulic pressure is applied.

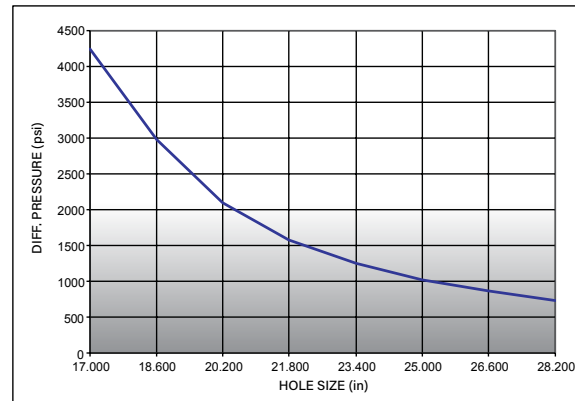
FEATURES

- High integrity drillout with one-piece and two-piece mandrels
- Full burst and collapse rating of running casing
- Separate plug operation avoids over-displacement
- Inflatable element pressure control Shorter length than individual tools
- Closer inflatable element and cementing ports
- Inflated with cement, mud, or water
- Continuous and discontinuous ribbed element options

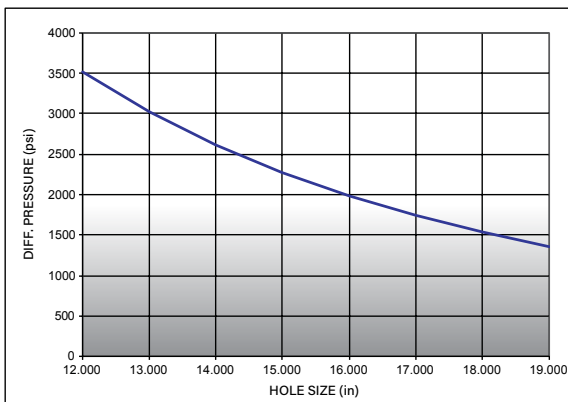
PRESSURE CURVES



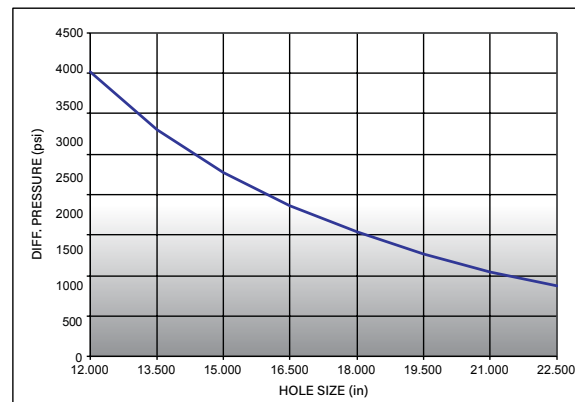
Pressure Curve for 13.38, 4ft element



Pressure Curve for 13.38, 10ft element



Pressure Curve for 9.63, 4ft element



Pressure Curve for 9.63, 4ft element

