

# Stronghold® Defender® System

## Permanent Caprock Integrity

Archer's field proven Defender® barrier test system enables operators to perforate and test an annular barrier. The Defender® is part of a series of Stronghold® perforating, washing, cleaning and cementing systems to deliver faster, safer and more economical solutions for operators worldwide.

The Defender® system provides a safe, quick, economical and effective alternative to traditional plug and abandonment (P&A) techniques of casing recovery, milling and perforate, wash and cement. Traditionally, several runs were required to test the annulus. Setting two plugs and perforating usually took up to 3 runs.

Archer's Defender® system achieves this in just 1 trip by:

- Perforating the casing or liner
- Verifying the integrity of the annulus
- Placing barrier material in the casing and annulus

The result is a permanent verified barrier that is achieved in a single trip – a simple, cost effective solution for annular remediation, bringing absolute protection and safety. Together with Tubing Conveyed Perforating (TCP) products and new charge development, Archer's Stronghold® systems support the safe and efficient execution of operations. In designing the Stronghold® Defender® system, our engineers focused on 3 key areas – Efficiency, Flexibility and Reliability to produce a service that is economical, efficient and effective.

### Benefits

- Field proven
- Significant time and cost savings
- Efficient one-trip system with TCP
- No section milling and swarf handling
- Qualification of an effective barrier
- No surge or swab effect

### Features

- Primary and back-up swab cup design
- Adjustable distance between swab cups
- Flow by-pass system
- Disconnect system
- Ball or dart drop

### Specifications

Typical casing sizes, in	6 5/8 - 7 5/8"	9 5/8" x 16"
Min ID, in	2.2	2.3
Pressure rating, psi [bar]	5,000 [344]	5,000 [344]

Specifications may be subject to change