

# 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.



**STRONGHOLD™**

### 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

### Applications

- Well abandonment
- Formation integrity testing
- Annular solids integrity testing
- Circulation out of old, environmentally unfriendly, annular fluids

### Features

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

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.

### Specifications

Casing Size, in	6 5/8 - 8 5/8	9 5/8 - 16
Min ID, in	2.2	2.3
Pressure rating, psi [bar]	5,000 [344]	5,000 [344]



Archer is a global oil services company with a heritage that stretches back over 40 years. With a strong focus on safety and delivering the highest quality products and services, Archer operates in 40 locations over 19 countries providing drilling services, well integrity & intervention, plug & abandonment and decommissioning to its upstream oil and gas clients. **We are Archer.**