



## GENERAL PRODUCT SHEET

### Duplex Inner-String Stage Cementing System

#### PRODUCT DESCRIPTION:

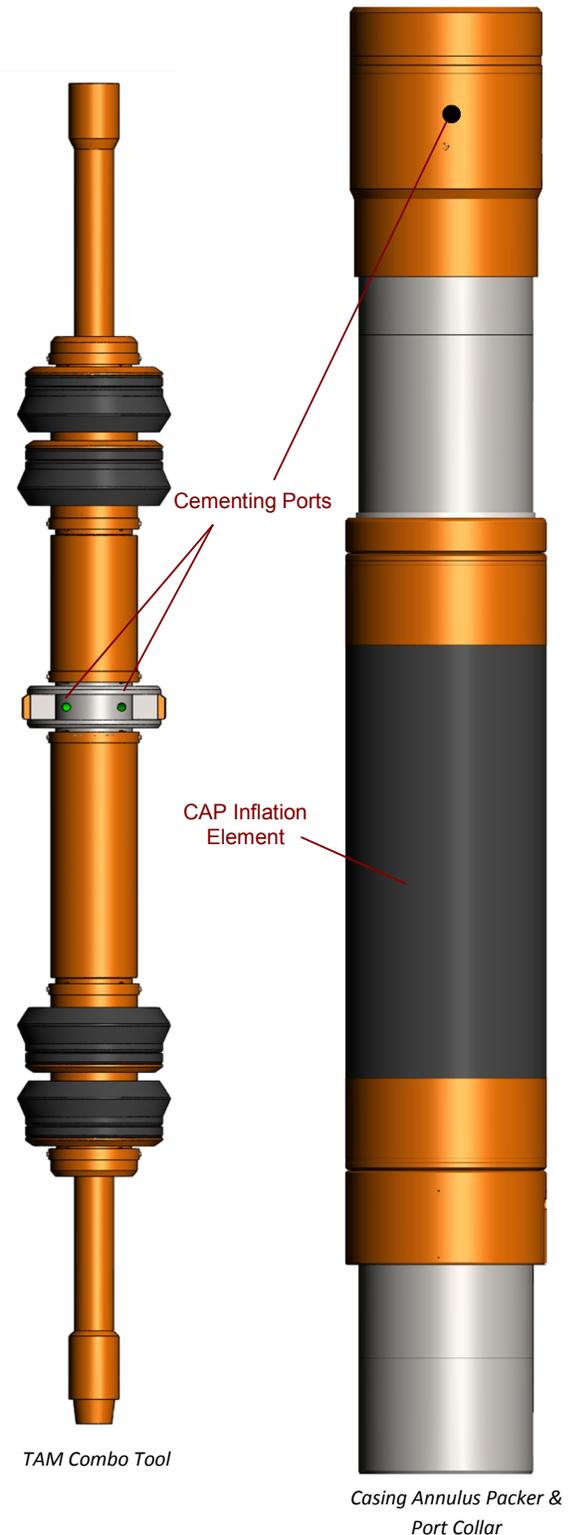
The TAM Duplex Inner-String Stage Cementing System is utilized to perform stage cementing operations in challenging, large diameter casing applications. The system is comprised of an ISO 14310-qualified inflatable casing annulus packer (CAP), an ISO 14998-qualified full-bore mechanical stage cementing tool (Port Collar), a TAM Combination Tool (Combo Tool), and a stab-in float system. This unique solution enables the operator to perform an inner-string primary cement job through the stab-in float collar, and subsequently inflate the packer and perform a second stage cement job all in a single trip.

#### FEATURES:

- Primary cement job performed using industry-standard inner-string cementing equipment
- TAMCAP (3 ft) and LONGCAP (8.5 ft) packer constructions utilize high-strength stainless steel slats to reinforce the full length of the inflatable element
- LONGCAP packer configuration incorporates redundant duplex valve system
- Port Collar functioned with simple rotational manipulation of Combo Tool
- Variety of Combo Tool accessories available for operational customization
- Combo Tool utilizes collapsible cups and spring-loaded dogs to enable it to easily pass through wellhead restrictions and profiles

#### BENEFITS:

- Enhanced primary cement job
  - Minimized slurry contamination
  - Shorter circulating/displacement times
  - Reduction in the amount of cement to be drilled out
  - No large diameter cement heads and plugs required
- CAP serves as a secondary mechanical barrier as well as a platform for the second stage cement job
- Positive inflation of CAP element can be accurately controlled and monitored using the inner string and Combo Tool
- Port Collar can be reliably functioned multiple times with simple left hand/right hand rotation
- Combo Tool functionality enables reverse circulation by pumping past the top cups and taking returns up the drill pipe
- Full bore tool IDs eliminate requirements for drill out
- Combo Tool isolation sleeve prevents cement contamination between cups during first stage cementing operations
- Port Collar can be pressure tested immediately after closure to confirm pressure integrity has been reestablished



TAM Combo Tool

Casing Annulus Packer & Port Collar