



GENERAL PRODUCT SHEET

Mechanical Packer Cementing Collar - PCC

PRODUCT DESCRIPTION:

The Mechanical Packer Cementing Collar (PCC) is a combination of a Casing Annulus Packer (CAP) and Mechanical Cementing Collar for multi-stage cementing applications. The PCC is run as an integral part of the casing string to provide an annular seal below a 2nd or 3rd stage cement job, ideal for wells with lost circulation zones. After the first stage cement job is displaced and the first stage plug lands on the baffle, the CAP is inflated by applying pressure to the casing string. A free fall device is dropped to the Mechanical Cementing Collar and pressure applied at surface opens the cementing ports. Once the stage cement job has been pumped, a closing wiper plug is displaced behind the cement. The closing wiper plug lands in the Mechanical Cementing Collar and permanently closes the cementing ports. All components inside the Packer Cementing Collar are PDC drillable.

The CAP is constructed utilizing the unique TAM slat element, a full reinforced design mounted on a pup Joint of API casing with thread and weight matching the casing string. The Stage Cementing Tool is manufactured to meet a variety of casing weights, material grades and threads. All CAPs and Stage Tools are designed to be an integral part of the casing string, meeting all material and drift requirements.

PROVIDE SOLUTIONS FOR:

- Two-stage or three-stage cementing
- Prevent annular gas migration
- Off bottom cementing
- Isolates lost circulation zones during cementing
- Ideal for vertical wells

FEATURES:

- Integral CAP and Cementing Collar
- Field proven CAP elements
- SafeLok™ valving in the CAP with lock-out for element security
 - Optional Deadbolt™ valve system for casing integrity in lost circulation wells
- Inflation with water, drilling muds or cement
- Large cementing ports
- Locking internal closing sleeve
- From 3 ft to 20 ft seal length
- PDC drillable components
- Field adjustable setting pressures

BENEFITS:

- Reduces drilling time and costs by eliminating intermediate casing string designs
- Meets casing drift after drill out
- SafeLok™ valve system
 - Maintains casing string integrity
 - Provides delayed opening
 - Deadbolt™ valve maintains casing integrity in lost circulation zones



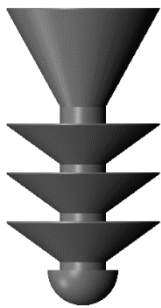


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TOOL SIZES AND CONFIGURATIONS:

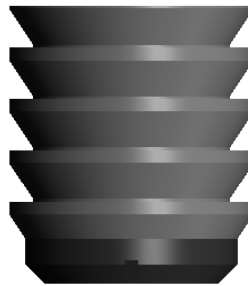
Casing Size	Tool ID	Seal Length
4-1/2 in to 20 in (114 mm to 508 mm)	Drifts per casing weight after drill out	3 ft to 20 ft (.91 m to 6.1 m)



First Stage Plug
Mechanical DVM



Composite Opening
Cone Mechanical DVM



Closing Plug
Mechanical DVM