

20ksi “CK” Profile

Choke & Kill Rod Seal for Oil & Gas
Marine Riser Equipment



Proven solution validated to industry standards

Parker's next generation “CK” profile choke and kill rod seal provides outstanding performance for drilling companies as operations expand to exploration and production in deeper oil reserves in harsh environments.

The CK profile is a proven solution capable of reliably sealing in HPHT applications to 20,000 psi and is manufactured from high performance elastomers which have been independently certified to meet the stringent requirements of API 16C Annex B for safety and interchangeability.

Contact Parker's experienced oil and gas application engineers to learn more.



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Product Features:

- Validated to 20,000 psi working pressure
- Temperature capable from 35°F to 350°F
- Seal profile and seal materials tested per API Specification 16C Annex B, Sections B.9.4.3 and B.9.4.4
- Materials qualified to API 16C (10% Sour Gas) and suitable for the most demanding down-hole environments
- Worldwide availability



ENGINEERING YOUR SUCCESS.

Validated to 20,000 psi

Per API 16C Test Protocol*

In response to increasing market need for 20ksi equipment, Parker has developed the next generation of choke and kill seals for 20ksi operations. These seals have been tested to the latest API 16C Annex B specification in the full spectrum of application ranges.

Following the protocol specified in Section 9.4.3.5 of API 16C, Parker's "CK" profile seal was subjected to temperature and pressure cycling in a test fixture. At completion of the test, the subject seals were inspected in accordance with test protocol and pass/fail criteria. As a result, Parker EPS has qualified the new CK seal to the API standard with defined application parameters to ensure safe, successful operations for 20ksi wells.

The CK profile Seal manufactured from Parker's proprietary VG109 material and anti-extrusion spring has tested successfully for 35°F to 350°F applications with minimal effect to the seals.

Seal Profile: Custom "CK" profile with an o-ring energizer and PEEK coated stainless steel anti-extrusion garter spring

Seal Specifications

Seal material (shell)	VG109 (FKM)
O-ring energizer	V1289 (FKM)
Anti-extrusion device	PEEK Coated Stainless Steel Spring

Test Specifications

Test Temperatures	Min: 36°F	Max: 350°F
Rated Working Pressure	20,000 psi	
Extrusion Gap	0.012"	
Test Fluids	Phillips66 Megaflow® AW 46	



Fig. 1. Cross Section



Fig. 2. Lip



Fig. 3. Heel

Photos of Test Seal shown in Fig. 1, 2, and 3 show seal condition after completed testing. Very little compression set is evident. Slight extrusion is noted in the heel (Fig. 3) while critical sealing areas (lip) remain fully intact (Fig. 2).

API 16C Annex B Approved Materials**

Parker's VG109 material has been immersion tested to API 16C Annex B, reviewed against strict acceptance criteria, and has passed all certification requirements. Choke and kill equipment manufacturers who specify Parker API 16C certified sealing solutions can now focus on drilling technology development without the added expense of

providing their own certification for non-metallic sealing components.

Each batch of parts can be supplied with certified material test reports that include hardness, tensile strength, elongation at break and specific gravity upon request.

*Test report available.

**Certified material test reports including hardness, tensile strength, elongation at break and specific gravity available upon request. Independent laboratory test report also available upon request.

For more information, contact us via phone at 800 233 3900, or email: eps-ccare@parker.com.

