# **Application Bulletin**

# Kennametal Conforma Clad<sup>™</sup> Mud Motor Radial Bearings

# ... over 300,000 supplied to major oil and gas companies with NO catastrophic failures!

### **Increased Bearing Life and Reliability**

Our exclusive cladding sustains tight tolerances and remains durable, even under extreme heat and stress. Kennametal Conforma Clad bearings are trusted to run reliably — no catastrophic failures in operation.

#### **Reduced Operational Costs**

Unprotected bearings must be replaced every 20–60 hours. Kennametal Conforma Clad bearings have a life cycle of over 300 hours, significantly improving feet-drilled-per-day and lowering the average cost-per-foot-drilled.

## **Improved Motor Performance**

Operators can push motors without damaging the bearings, enabling sharper turns, faster penetration, and less drilling time.

## **Enhanced Drilling Accuracy**

Reduced bearing wear means design tolerances are maintained downhole, resulting in improved mud motor control and greater drilling accuracy.

#### **Unsurpassed Quality Standards**

Kennametal Conforma Clad radial bearings are designed and manufactured according to stringent quality standards that govern material selection, machining, infiltration brazing, surface finishing, and packaging.





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#### Kennametal Conforma Clad™ Technology

Kennametal Conforma Clad has been perfecting wear protection for directional drilling components since 1985. Major oil drilling and exploration companies worldwide trust Kennametal Conforma Clad technology to preserve their high-performance drilling components. Our proprietary cladding technology is the best wear protection available for downhole and surface equipment, including mud motor bearings, flow restictors, and flow diverters.

Kennametal Conforma Clad bearings last longer so contractors can push mud motors harder and get the job done faster. Our radial bearings easily handle extreme side loading, enabling sharper turns and increasing drill accuracy. Kennametal Conforma Clad bearings deliver proven reliability — making them the industry standard.

#### **Proven Results**

Reliability is as important as speed and accuracy when drilling for oil and gas thousands of feet below the earth's surface. You can't afford a critical component failure, especially downhole where the cost of downtime far exceeds the cost of replacement parts. Kennametal Conforma Clad radial bearings stand up to the rigorous demands and harsh drilling environments inherent to oil and gas exploration.

Kennametal Conforma Clad is a leading provider of radial bearings to the oil and gas industry. We have supplied more than 300,000 radial bearings to major oil-and-gas companies over the past 30 years with no catastrophic wear failures. Operators and maintenance teams rely on Kennametal Conforma Clad to reduce downtime and increase drill productivity.



#### **Radial Bearing Specifications**

	Barrel Dimensions (in)	
	Diameter Range	Length Range
Inside Diameter (I.D.)	3/4–12	1/2–30
Outside Diameter (0.D.)	3/4–12	1/2–30

Kennametal Conforma Clad offers a wide range of I.D. and O.D. clad radial bearings to fit an assortment of mud motor sizes and configurations.

Cladding Specifications		
Substrates	Cladding can be applied to most alloy steels, carbon steels, precipitation-hardened steels, and stainless steels. Bearings can be heat-treated after cladding process to restore mechanical properties of steel.	
Temperature	Continuous operation at temperatures up to 1900° F (1038° C) with nominal performance impact. Able to withstand transients in excess of 2000° F (1093° C).	
Chemical Resistance	Compatible with all downhole chemicals, such as $H_2S$ , $H_2SO_3$ , $H_2SO_4$ , HCI, $CL_2$ , Salt, Water, Oil, and Natural Gas.	

#### **CONTACT US**

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