



A new bearings standard from the standard bearer

For 25 years, Kennametal Conforma Clad® products have delivered unsurpassed oilfield performance. And now available: Kennametal Conforma Clad® **UltraClad™** radial bearings – for up to 200% more wear life versus our industry-standard WC200 style!

UltraClad™ RADIAL BEARINGS!



- super-sharp turns
- extremely fast penetration
- greatly diminished drilling time
- unmatched accuracy
- proven technology

 **KENNAMETAL®**
CONFORMA CLAD®

Kennametal Conforma Clad® Radial Bearings

...over 200,000 supplied to major oil-and-gas companies with NO catastrophic failures!

• Increased Bearing Life

Our exclusive cladding sustains tight tolerances and remains durable, even under extreme heat and stress. Kennametal Conforma Clad® bearings last over ten times longer than those protected by competitive materials.

• Enhanced Drilling Accuracy

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

• Reduced Operational Costs

Unprotected bearings must be replaced every 20 hours to 60 hours. Kennametal Conforma Clad® bearings have a run life 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.

• 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.



Radial Bearing Specifications

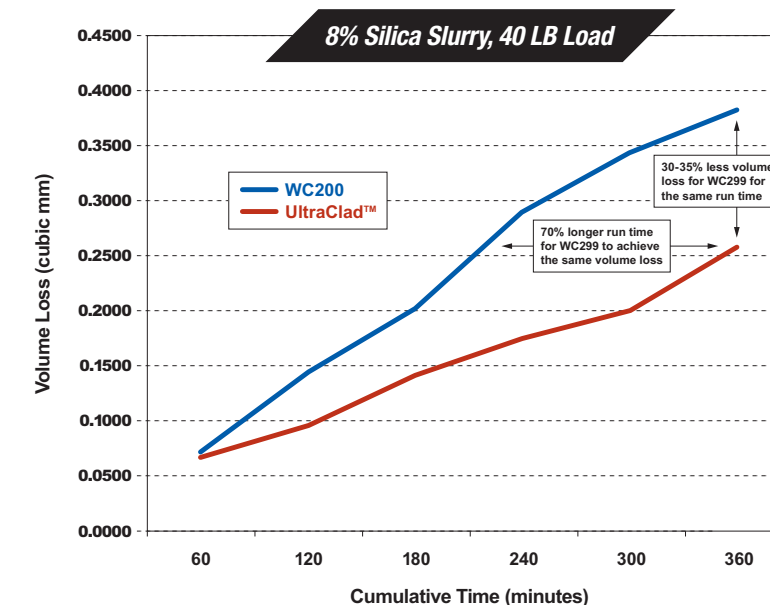
	Barrel Dimensions (in)	
	Diameter Range	Length Range
Inside Diameter (OD)	3/4 - 12	1/2 - 30
Outside Diameter (OD)	3/4 - 12	1/2 - 30

Kennametal Conforma Clad® offers a wide range of ID and OD 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 ₂ S, H ₂ SO ₃ , H ₂ SO ₄ , HCl, Cl ₂ , Salt, Water, Oil, and Natural Gas.

Performance Data

8% Silica Slurry, 40 LB Load		
Cumulative Time (min)	WC 200	UltraClad™
60	0.0709	0.0668
120	0.1445	0.0957
180	0.2019	0.1417
240	0.2898	0.1748
300	0.3431	0.1997
360	0.3819	0.2579



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 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 restrictors, 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 increased drilling 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 the leading provider of radial bearings to the oil-and-gas industry. We have supplied more than 200,000 radial bearings to major oil and gas companies over the past 20 years with no catastrophic wear failures. Operators and maintenance teams rely on Kennametal Conforma Clad to reduce downtime and increase drill productivity.