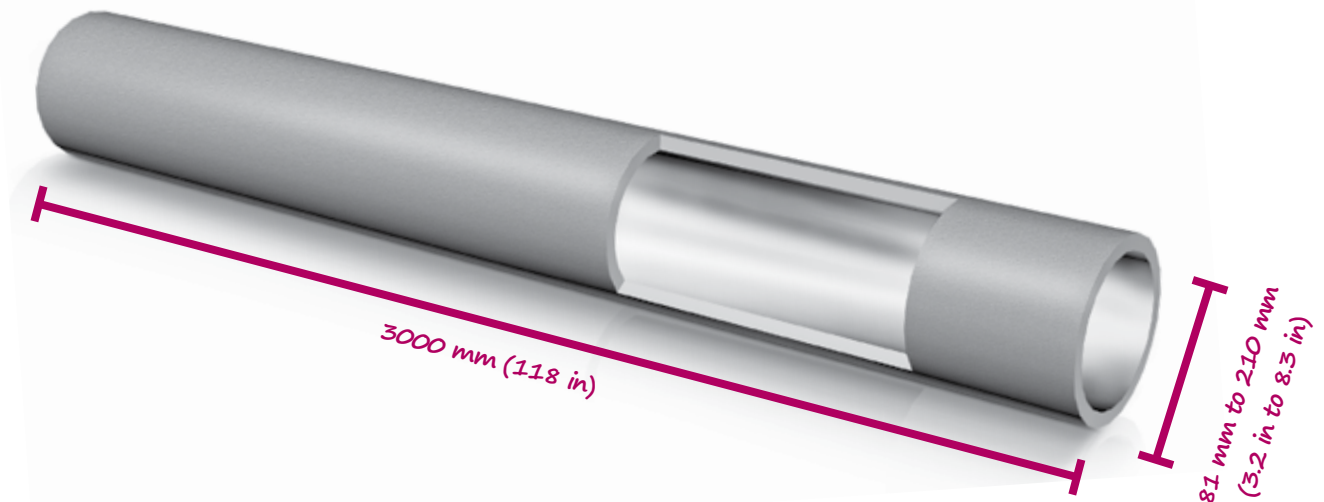
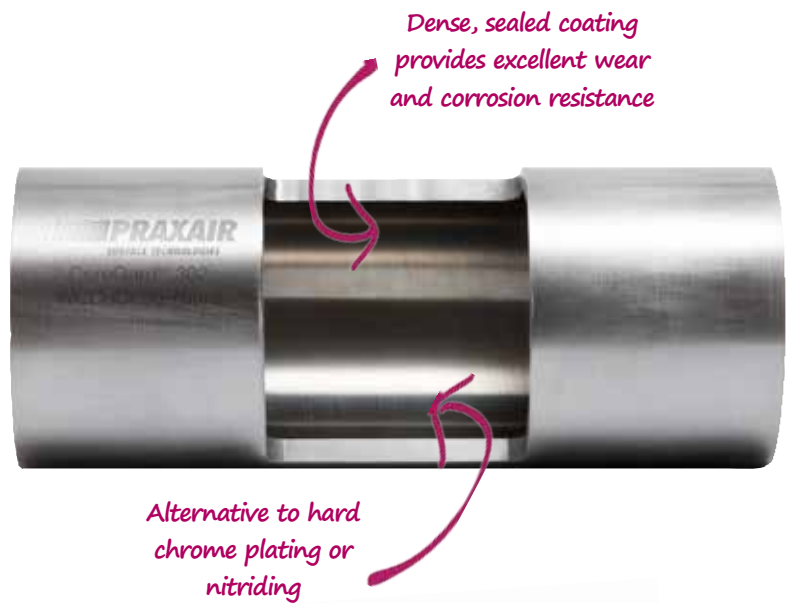


# CoreGard™ ID Coating

Now Available for Smaller Diameters  
and Longer Lengths

## Tungsten Carbide Coating Offers Lasting Protection

- Alternative to chrome plating and nitriding
- Prevents abrasion and erosion
- Resists corrosive fluids when combined with our sealant
- REACH compliant
- Can be applied inside a wide range of sizes, down to 3 inches  
Inner: 81 mm to 210 mm (3.2 in to 8.3 in)  
Length: up to 3000 mm (118 in)
- Extends part life for:  
Cylinders  
Pipes  
Sleeves  
Tubes



## Coating Characteristics

Physical Characteristics	Value	Test Method
Microhardness	1100-1300 kg/mm <sup>2</sup>	Vickers HV <sub>0.3</sub>
Apparent porosity	< 0.5%	Metallographic
Thickness	0.02-0.25mm 0.001"-0.010"	Recommended range
Operating temperature	540°C maximum in air	
Roughness	As coated: 80-120 µin Ra As finished: 4-8 µin Ra	
Sand erosion	20 µm/g at 30° 100 µm/g at 90°	ASTM G76

## Proven Results

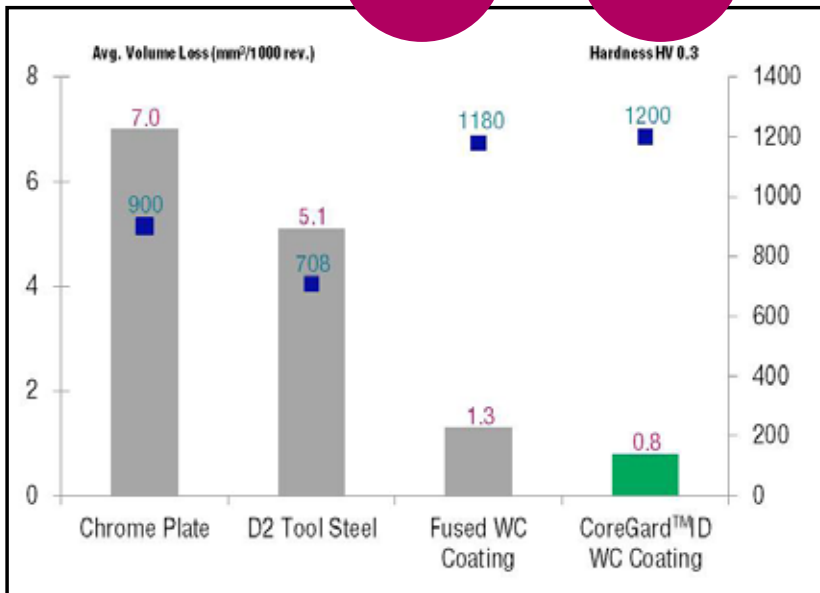
**Q:** Do CoreGard ID Coatings really last that much longer than hard chrome plating and nitriding?

**A:** Yes. Field testing verifies the performance. A CoreGard-coated downhole tool in use by a leading oil exploration company showed no signs of production loss after more than 1,000 hours. A Houston-based energy company, which typically expects about 100 hours from a component with hard chrome plating, reported continued functionality after 600 hours for parts coated with CoreGard ID Coatings.

## Sand Abrasion Test ASTM G65-81

More than 25%  
 harder  
 (than chrome plate)

>8.5 times lower  
 volume loss  
 (than chrome plate)



## Coating Microstructure



[www.praxairsurfacetechologies.com](http://www.praxairsurfacetechologies.com)

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