

WEAR SOLUTIONS

Application Bulletin

Food & Feed Extruder Components

LASTS 4-6x LONGER

For increased service life in the most extreme extrusion processes.

Kennametal Conforma Clad™ is a leading supplier of extreme wear solutions for applications experiencing severe abrasion, corrosion, and erosion. We manufacture **wear-protected replacement barrels, liners, and screw segments for most OEMs.**

- **Extend Component Life**

Superior abrasion and corrosion resistance reduces wear and improves component life 4-6x longer than unprotected equipment.

- **Produce Consistent Quality**

Protecting critical equipment tolerances permits tighter process control, giving you more consistent product quality and throughput.

- **Reduce Maintenance Costs & Downtime**

Tungsten carbide and Stellite™ alloy protection greatly increases component life, resulting in fewer rebuilds and less unscheduled downtime.

- **Lower Cost per Ton**

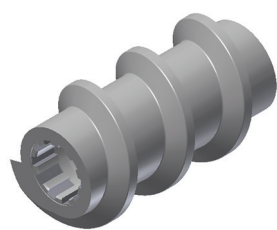
Longer component life, consistent quality, less downtime, and reduced maintenance costs creates a lower production cost per ton.

- **Full Range of Wear Protection**

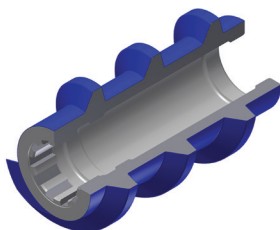
Kennametal Conforma Clad offers screw segments and liners with a variety of wear protection options. All cladding options fully encapsulate the screw ensuring complete protection.



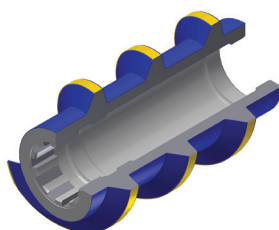
- CA6NM Hardened Stainless
- Stellite Cladding
- WC Cladding
- Tiles



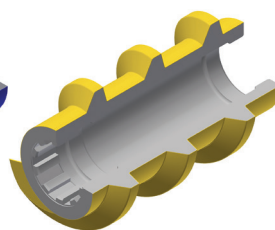
CA6NM Hardened Stainless



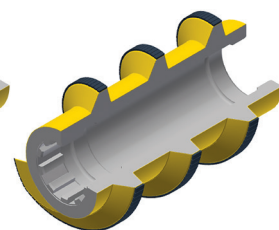
Full Stellite Cladding



Stellite and WC Cladding



Full WC Cladding



WC Cladding and Tiles



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Food & Feed Extruder Components

Stellite™ Cladding

- Maximum corrosion protection for niche pet food formulas.
- Maintains smooth wear surface throughout service life.

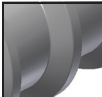


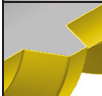

Tungsten Carbide Cladding and Solid Carbide Tiles

- Maximum abrasive wear protection.
- Tiles can be applied for enhanced wear properties.

Flexible Tungsten Carbide and Stellite Cloth

The Conforma Clad™ process starts with a flexible organic cloth embedded with either tungsten carbide particles or Stellite alloy. This unique cloth technology enables our wear protection to perfectly conform to complex geometries, such as screw surfaces. The infiltration brazing process metallurgically bonds the tungsten carbide or Stellite alloy to the base material. The result is a hard, protective cladding that is extremely durable and wear resistant.

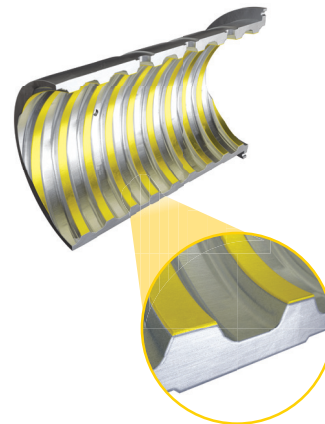
Relative Performance

		Life	Abrasion	Corrosion
	CAGNM Hardened Stainless	★	★	★
	Full Stellite Cladding	★★★	★★★	★★★★★
	Stellite and WC Cladding	★★★★	★★★★	★★★★★
	Full WC Cladding	★★★★	★★★★	★★★
	WC Cladding and Tiles	★★★★★	★★★★★	★★★

Kennametal Wear-Protected Components	
• Single Screws & Liners	• Twin Extruder Barrels
• Shear Locks/Lobes	• Shaft Supports
• Material Handling	• Conveyance Piping

Single Screw Liner

Twin Screw Replacement Barrels

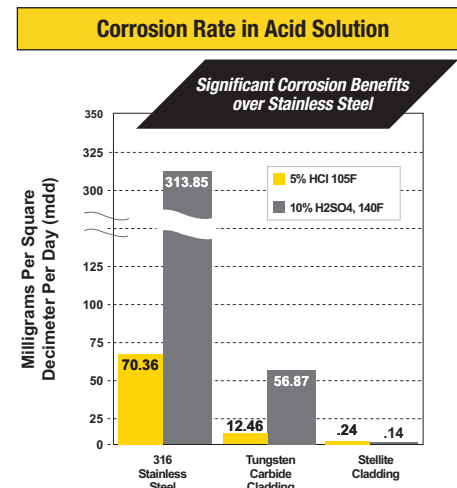
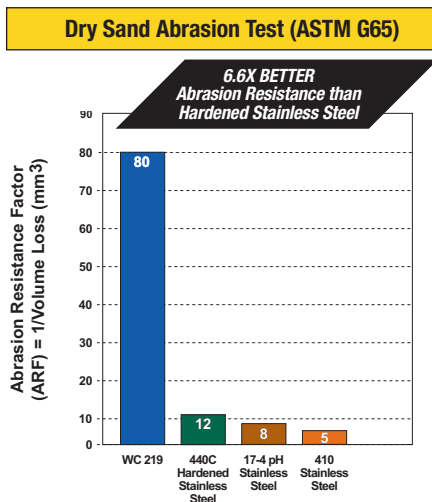


Tungsten Carbide and Stellite alloy wear protection applied where you need it most.

Stellite™ and Conforma Clad™ are registered trademarks of Kennametal Inc.

Performance Data

WC 219 Cladding Properties	
Total Carbide Loading	62%
Density (lb/in ³)	0.40
Thermal Conductivity (BTU in/h·ft ² ·°F)	170
Metallurgical Bond Strength (psi)	>70,000
Porosity	<3%
Rockwell Hardness (HRC)	56-62



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