



CENTURY EXTRUSION

Your Partner in Productivity

CX 465 Barrels

CX465 HIPped Barrel Material

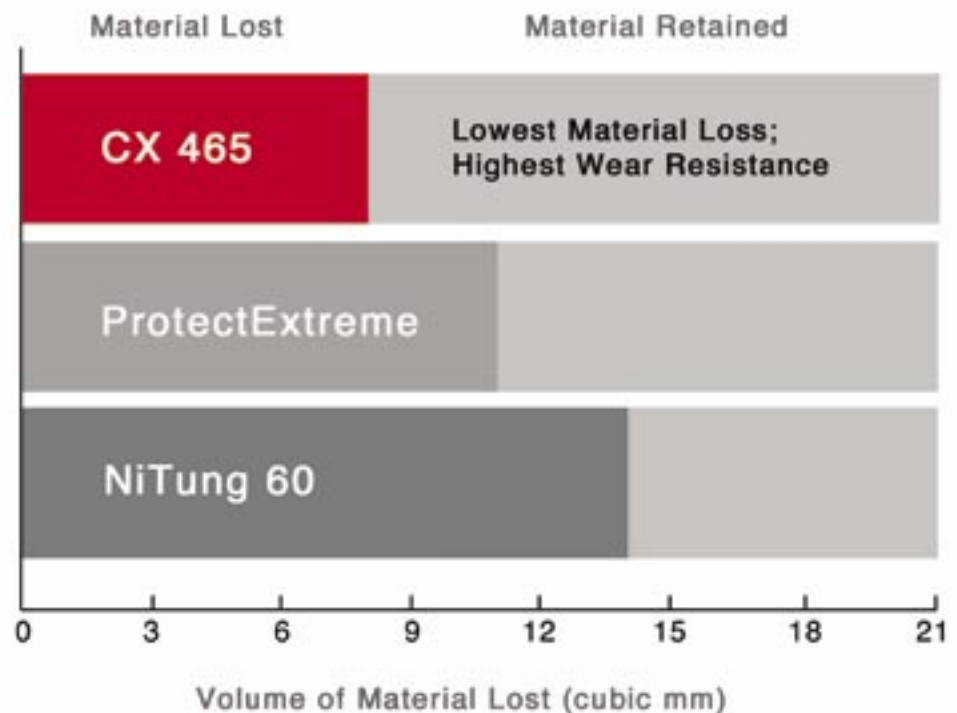
This material was specifically developed for high wear and corrosion applications. The material has a 65% by weight Tungsten Carbide blend with a Nickel matrix, outperforming all other barrel materials in this family of products.

The laboratory tests utilized the standard ASTM G65 sand rubber wheel test for abrasive wear. The tests measures volume of material lost. The lower the volume of lost material, the higher the wear resistance. The test showed 8.4 cubic mm loss for CX 465. For a base line comparison, D2 tool steel averages 36.5 cubic mm's of material loss and published wear data shows "Protect Extreme" at 11.3 cubic/mm loss.

(Century Extrusion's had 8.4 cubic mm loss and Protect Extreme had 11.3 cubic mm of loss)

Wear Comparison

Independent ASTM G65 sand rubber wheel test for abrasive wear

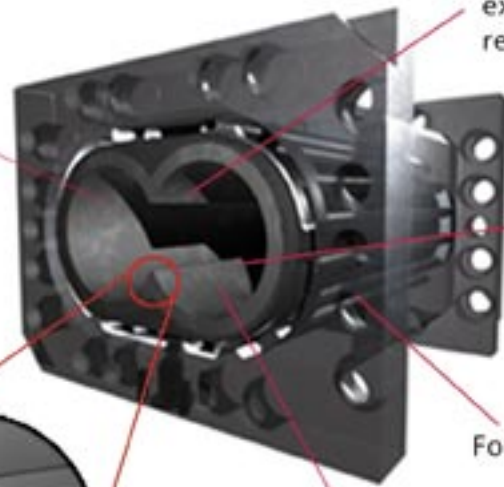




CX 465 Barrels

Seamless, 3mm, crack-free wear surface, heavily loaded with 65% tungsten carbide in a nickel matrix for maximum wear and corrosion resistance

Geometrically correct apex dimension provides theoretical design performance



High toughness for excellent impact resistance

Excellent bond strength and four times the wear depth as cladded coatings

Four-quadrant cooling

The industry's most highly-loaded, HIPped, tungsten carbide barrel

The wear surface of CX 465 is a HIPped powdered metallurgy. HIPping ensures a seamless surface which is free from pitting, voids and cracks. The surface is porosity free. Porosity is a serious issue affecting quality. In addition, the application allows for a thick (4.5mm average) layer of wear material. In applications where chemical attack is present, even though abrasive wear resistance is slightly less, CX 465 will out perform other materials due to its HIPped construction.

A brazed carbide cloth coating often has (R29 for example) good wear qualities but may possess inherent flaws that can lead to catastrophic failure. This family of material is laid in the bore profile in 6 strips resulting in 6 seams on each barrel figure eight bore profile. These seams do not always over lap during the braze cycle, sometimes leaving large voids. Other defects inherent to the brazing process include: porosity, cracks, and blisters. Cracks and porosity are apparent on all brazed carbide cloth coated barrels. Blisters, which sometimes occur during brazing (due to entrapped dirt or air under the cloth), are popped and welded after braze. Weld repair areas are very noticeable and are very often prone to failure.

These flaws are all areas for potential premature barrel failure. Specifically, these voids allow corrosive products to leach down and degrade the base metal causing the wear surface to chunk out. During used barrel inspections, these are typically the first points of failure that are noticed during an inspection.

HIPped CX 465's (industry's best) material composition and its process of application give it a higher wear and corrosion resistance over materials of like chemical make up. Its composition provides high wear & corrosion resistance and its process of application provides the same, due to lack of seams, pits, cracks, and porosity, all of which aid in wear surface failure.

Century Extrusion's new CX 465 proprietary barrel material will outperform the competition!