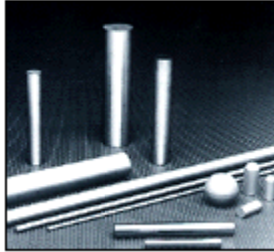


Product Line

Standard Rod and Burr Products



Hydro Carbide is one of the leading manufacturers of tungsten carbide rod in the U.S. For producers of rotary tooling, Hydro Carbide specializes in fine grain carbide grades HC-290 (C2) and micro-grain HC-US06, HC-US10, HC-US11, Ramet 1[®], and HC-US16 (which replaces high speed steel in numerous applications) and ultrafine grain carbide grades HC-UF08, HC-UF10 and HC-UF12.

Delivery of all standard pressed rod in inch and metric sizes is usually from stock. Special grades, sizes and shapes can be manufactured to customer specifications and delivered on time. Utility or finish ground rod is available in lengths up to 12 inches.

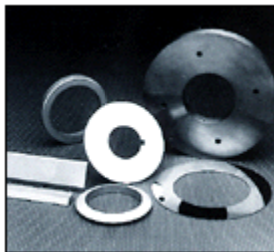
Preforms for the Rotary Tool Industry



Skilled machine operators at Hydro Carbide can drastically reduce grinding or EDM machine costs by providing preforms which require minimal stock removal.

By drilling, milling, profiling, boring, turning and threading compacted tungsten carbide in a wide variety of grades, tool and die makers reduce production costs.

Rotary Slitter Knives and Edge Trimmers



Whether customers require an edge that is razor sharp or is resistant to chipping, Hydro Carbide offers a grade that will meet their specific slitting, cutting, trimming or chopping needs, improving productivity while lowering tooling costs.

Blanks and Tips for Toolmakers

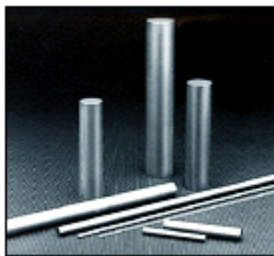


For manufacturers of tungsten carbide tools, Hydro Carbide offers blanks with close tolerances on flatness and roundness. Parts are inspected at each step of the manufacturing process so that the blanks exactly match customer specifications.

Grades range from submicron, which offers exceptional wear resistance, to medium/coarse grain grades, suitable for heavy impact applications. Uniform grain size, even cobalt distribution and the absence of voids all are results of Hydro Carbide's strict quality control program.

Low Cost Producer of Special Preformed Blanks for Toolmakers

Jobber length, Ball nose, Rod with centers (male or female), Combination drill and countersink blanks, Coolant hole blanks, Step blanks, Special and standard burrs, Special preforms, Tapered end mill blanks, Centerless ground standards or specials, Boring bar blanks



For producers of end mills, drills, burrs, reamers, taps and a variety of rotating tools, Hydro Carbide produces pressed and sintered rod in many standard grades and sizes.

In addition to standard rods, special non-stock parts are available in all sizes and all grades. Delivery on these specials is usually two to three weeks.

Hydro Carbide also supplies nozzles, valve parts, die preforms, rolls and rings, high pressure tooling, knives, slitters and wear parts.

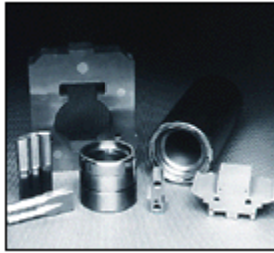
Centerless Ground Rod for Rotary Tool & Die Makers



Hydro Carbide helps rotary tool makers and die makers increase productivity and profit margins by producing a variety of standard and special rod blanks in most popular grades, either un-ground, utility-ground, or precision-ground to exact specifications.

Hydro Carbide efficient centerless grinding and measurement system consistently maintains .0003 inch tolerance while sophisticated laser measurement technology guarantees parts are produced within strict control limits. Statistical Process Control (SPC) reporting is done automatically as parts are produced.

Preforms for the Die Industry



From submicron grades which offer exceptional wear through fine and medium grain sizes for applications involving impact, Hydro Carbide materials provide consistent, superior performance in mining, metal forming, metal producing, gas and oil recovery and transmission, and other demanding applications, Hydro Carbide products are providing solutions to costly wear problems.

The keys to this consistent performance are uniform grain size, even cobalt distribution and absence of porosity and voids.

Nozzles, Valves and Bearing Components for the Fluid Handling Industry



Hydro Carbide produces a wide variety of wear-resistant tungsten carbide valve components, nozzles, valve trim, compacts, studs and other items used for mining, well drilling, processing and transporting oil, coal and natural gas.

Hydro Carbide's engineering staff works with customers to provide technical assistance on grade selection and optimum component design which results in long and profitable part performance.

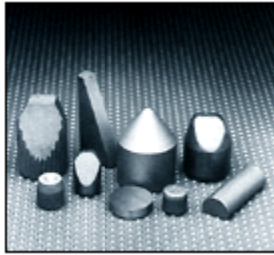
Rolls and Rings for the Metal Producing Industry



For the metal producing industry, Hydro Carbide manufactures tungsten carbide hot and cold mill rolls, flattening rolls, slitter knives, edge trimmers, scrap chopper blades, saws, guides and other parts suitable for use in tough mill environments. Hydro Carbide makes grades which range in hardness from 93.0 RWA to 83.5 RWA.

Hydro Carbide's rolls and slitters are produced as large as 12 inches in diameter and up to 20 inches long. The materials are 100% dense and components such as work rolls are often finished to 1 RMS. Other mill products include burnishing, capstan, rod mill, turks head, Koch mill, wire flattening and tube mill rolls.

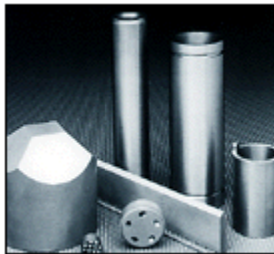
Compacts for the Drilling and Mining Industry



For manufacturers of rock drilling tools, Hydro Carbide produces components which perform well even under the most difficult conditions. Hydro Carbide drilling compacts, studs, geophysical inserts, flat top compacts and drill stabilizer products are produced by direct pressing from carbide grades of medium to coarse grain structure and from 10% to 19% cobalt.

Hydro Carbide's Gulfport, MS, manufacturing facility is strategically located to service the needs of OEM producers of earth drilling tools. Location, efficiency, and years of experience in pressing carbide make this first-class carbide plant the preferred supplier of drilling components for some of the world's largest rock bit, water well bit, geophysical and drill stabilizer manufacturers.

Ultra High Pressure Tooling and Wear Parts



The exceptional hardness, rigidity and dimensional stability of tungsten carbide, plus its resistance to extremes of abrasion and corrosion at high and low temperatures, make it the ideal solution to many wear problems.

Hydro Carbide has field-experienced engineers and service personnel who work with customers to provide solutions to wear problems. Hydro Carbide can offer technical assistance on grade selection and component design – assistance that adds up to long, profitable part performance.

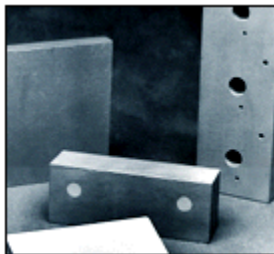
Hydro Carbide personnel also have access to a staff of scientists and technicians. Using an impressive range of modern equipment, this staff conducts basic and applied metallurgical research and product development. This staff is also available to customers of Hydro Carbide who desire problem solving or product development assistance.

Intricate Shapes



Skilled craftsmen, strict quality control and attention to detail allow Hydro Carbide to manufacture intricate tungsten carbide shapes. Modern metal making processes, special machine tools, a state-of-the-art laboratory, the latest measuring devices, quality control and well trained technicians add up to superior products made to exact tolerances.

Stress Free EDM Blocks



Toolmakers worldwide rely on defect-free material from Hydro Carbide for producing critical tooling components. Hydro Carbide's unique manufacturing system creates tungsten carbide EDM blocks that are remarkably stress-free.

Pure raw materials, a carefully documented quality system, modern equipment, employee training programs plus an ongoing research program involving state, federal and university resources complement every aspect of Hydro Carbide's operations.

EDM blocks are available with or without start holes. Additionally Hydro Carbide offers tungsten carbide compositions in submicron, fine, medium or mixed grains. The laboratory at Hydro Carbide provides technical assistance in the form of applications analysis.

This, plus fast reliable delivery, make Hydro Carbide the toolmaker's choice for EDM blocks for tough stamping, laminating, extruding, powder compacting and forming applications.

Technical Assistance



For failure analysis or for product improvement, carbide engineers at Hydro Carbide can offer expert assistance in solving problems. Years of experience in the tungsten carbide industry coupled with state-of-the-art laboratory facilities permit Hydro Carbide engineers to analyze material and offer expert assistance in recommending improvements.