



**HOGEN INDUSTRIES, INC.**

OF INDIANA

4655 Massachusetts Avenue

Indianapolis, IN 46218

## **Machining Tungsten Composites**

Our high density tungsten alloy metal machines like gray cast iron. Typical Hardness ranges from 79-109 Rb. Its low thermal expansion and other characteristics allow you to hold very close tolerances and fine finishes can be held. A coolant is optional, and carbide tools are recommended in most cases.

Turning and Boring - Carbide inserted cutters are suggested.

Roughing - Cutting depth of .030" to .125" and .008" to .015" feed, at 200 to 300 SFM.

Finishing - .010" to .015" cutting depth and .004" to .010" feed at 250 to 400 SFM.

Tapping - Use high-speed steel or carbide, two flute plug spiral point taps. A light tapping fluid is recommended.

Drilling - Carbide tooling is suggested. Increased clearance angles and automatic feeds are often used to avoid binding and seizing. Carbide drills will give a better tool life.

Grinding - Use aluminum oxide or silicon carbide wheels of medium hardness.

Milling - Carbide cutters are suggested.

Roughing - Feeds of .007" to .015" per tooth at speeds of 200 to 400 SFM.

Finishing - Feeds of .003" to .010" per tooth at speeds of 300 to 700 SFM.

Sawing or Cutting - When sawing, use a bi-metal blade; blade pitch should be relative to the thickness of the material. Coarse blades can be run at low speeds, and finer blades run at higher speeds. Coolant can be used. Material can also be cut using high-speed abrasive cutoff wheels.

If you need any further information, please do not hesitate to contact  
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