



# EagleRock

PRODUCTS

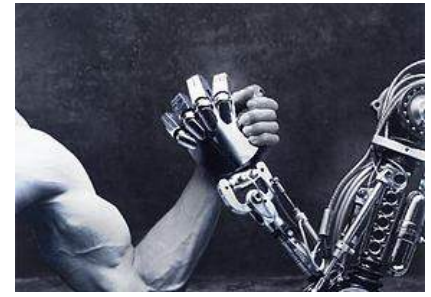
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BRIDGE SAWS  
FABRICATION CENTERS  
WATER RECYCLING  
DUST CONTROL  
TOOL SETTER

**A SOLID CUT ABOVE**

## Production Details

There are many details regarding the processing and production of stone materials. Below we have some parameters and guidelines for you to consider regarding CNC machines and tooling use.



### Tooling Information

#### What you'll need:

- Finger bits
- Core bits
- ISO 40 cones (hold tooling, bits, and wheels)
- Calibrating wheel (evens out the surface)
- Profile tool set (7 wheels - 4 stone, 3 resin polishing)

#### Profile Considerations:

- Profile sets cost \$2,000 - \$3,500
- Profile sizes: 60mm or 120mm diameter
- Profile heights: 2cm, 3cm, or 4cm
- Each set consists of:
  - 4 diamond bits and 3 polishing bits
- Regular speed or hyper speed sets are available

#### Tool Durability / Life span:

Some expected guidelines are below regarding durability/life span:

- #1 Diamond tool: 4,000 - 6,000 linear feet
- #2 Diamond tool: 12,000 - 16,000 linear feet
- #3 Diamond tool: 12,000 - 16,000 linear feet
- #4 Diamond tool: 12,000 - 16,000 linear feet
- #5 Polishing tool: 1,000 - 1,500 linear feet
- #6 Polishing tool: 1,000 - 1,500 linear feet
- #7 Polishing tool: 1,000 - 1,500 linear feet

Finger bits last approximately 300 - 600 feet  
Core bits last for 200 - 300 holes

Variations in wear are the result of how much material the bit is required to remove as well as differences in bit density. The lifespan of the #1 diamond tool can be extended by dressing the wheel periodically. This in turn extends the life of all the other bits as well.

#### Tool Setting

Setting up your 7 set tool profiles is best performed with the EagleEYE tool setting device. This microscopic digital camera can help insure quality polish and drastically cuts down set up time.

### Shop Requirements

#### Water:

Fresh water is required for inside the spindle.  
Recycled water can be used for outside the spindle.  
Water use: Approx. 5-7 gallons per minute total usage. Fresh water requirement is about 10% of this amount. With recycling the water, figure about 200 - 300 gallons per day of fresh water use with 8 hours of consistent machine use and a good recycling system.

Water recycling - there are two main ports that face towards the back of the machine to drain the water. A variety of water recycling systems can be employed to reduce water usage. We have some very compact and powerful water cleaning (solids removal) and recycling systems available here at Eagle Rock. If you need a system to clean large amounts of water quickly, we have solutions available.

#### Air:

120 PSI needed, low volume

#### Electric Power:

Uses: 3 Phase, 380 V  
*Transformer ships with the machine*  
Accepts 208V, 220V or 240V - 3 Phase power

#### Physical Space:

Please refer to the comparison page (download) to receive full details of all three machines in a side-by-side chart.

Overall machine dimensions:

**Vision2:** D:87" H:85" W:172"

**Vision3:** D:125" H:94.5" W:213"

### Manual vs. CNC

The following information has been gathered from a number of sources. These numbers can be used to make a reasonable estimation of cost savings from automated CNC equipment versus manual fabrication.

#### Manual Fabrication:

Tooling cost per lineal foot: \$3.00  
Approximate production labor cost is calculated at \$15 per hour with a 3 foot per hour production = \$5 manual labor cost per lineal foot

**TOTAL manual cost =  
\$3 + \$5 = \$8 per lineal foot**

**Manual cost: \$8 per lineal foot**

#### CNC Fabrication:

Tooling cost per lineal foot: \$1.00 (wheels and bits)  
Approximate production cost with a machine operator paid at \$20 per hour with a 15 foot per hour production rate = \$1.33 CNC cost per lineal foot

**TOTAL CNC cost =  
\$1 + \$1.33 = \$2.33 per lineal foot**

**CNC cost: \$2.33 per lineal foot**

For additional information about calculating manual labor versus CNC production costs, please contact us and we will send you an Excel spreadsheet to help you determine the appropriate comparison for your shop.

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