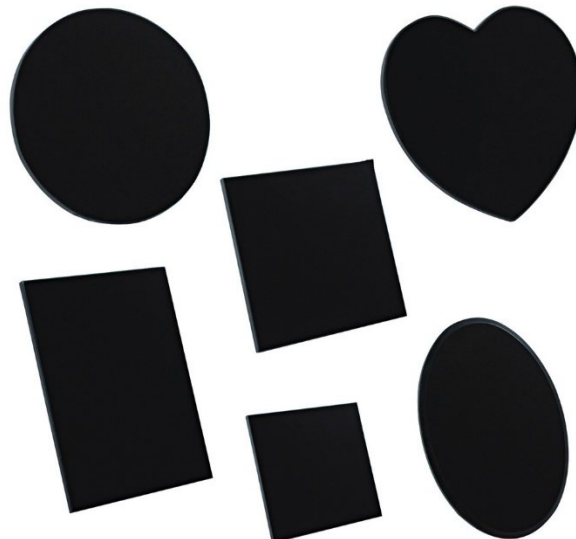
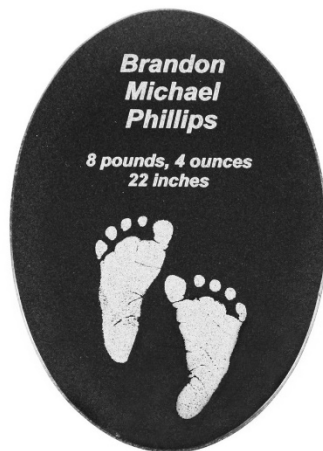


## Black Granite Tile Products

**JOHNSON**PLASTICS  
PLUS

### BLACK GRANITE TILE PRODUCTS - Rotary Engraving

MCH040 | MCH041 | MCH042 | MCH043 | MCH044 | MCH045 | MCH046 | MCH047 | MCH048 |  
MCH054 | MCH055 | SPK044



## GENERAL ROTARY ENGRAVING PROCESS

### Recommended Equipment & Accessories

- CNC Router or Rotary Engraver
- Tacky mat, holder/jig
- Clean Towel
- Compressed air

Recommended Settings - Rotary Engraving using standard cutters	
Engraving Rate	1-1.5 in/sec.
Engraving Depth	0.002-0.005"
Spindle RPM	10,000-12,000
Bit Type and Size	Carbide tipped tools/bits 0.003"-0.125" tip widths
(Optional) Lubricant	Engraving fluid/lubricant for granite/stone

Recommended Settings - Rotary Engraving using non-rotating diamond drag bit	
Engraving Rate	1-1.5 in/sec.
Engraving Depth	0.001-0.003"
Spindle RPM	0 (non-rotating)
Bit Type and Size	Diamond-tipped non-rotating bits
(Optional) Lubricant	Engraving fluid/lubricant for granite/stone

### General Rotary Engraving Instructions

- Place the granite tile blank onto the engraver bed and align to the zero point.
  - Use of a tacky mat, holder or jig is recommended to hold the granite tile blank securely during engraving.
- Select the appropriate engraving bit for granite/stone or hard materials.
- Set the engraving depth, Spindle RPM, and engraving speed to the suggested settings.
  - Settings may need adjusted depending on the engraver/CNC settings scale.
  - If using a diamond drag bit, make sure to turn the spindle OFF.
  - For best results and to prolong the life of the engraving bit, it is recommended to coat the granite tile surface with engraving fluid before engraving.

- Send the job to the engraver/CNC.
  - When finished, remove the granite tile from the engraver/CNC bed. If cleanup is needed, blow out engraved areas with compressed air or wipe with a clean cloth lightly dampened with a light cleaner.
    - When using engraving fluid, using compressed air to dry out the engraved areas is recommended.
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### **Tips and Tricks**

- To help with artwork placement, utilize the product template for this item, found on the item's product page on [jpplus.com/](http://jpplus.com/).
  - Create or employ a jig to help hold the product for easier positioning and faster changeovers when engraving high volumes.
  - For best results and to prolong the life of the engraving bit, it is recommended to coat the granite tile surface with engraving fluid before engraving.
  - When using engraving fluid, using compressed air to dry out the engraved areas is recommended.
- 

### **Troubleshooting**

- The engraving is not clean.
    - Increase the spindle speed a small amount.
    - Decrease the feed (XY) speed.
    - Ensure the vacuum system of the engraver/CNC is adequately removing the engraved chips while engraving.
  - The engraved area shows the tool marks.
    - Switch the engraving bit/tool to a smaller diameter tip.
    - Switch to a different style/shape engraving bit/tool.
    - Select product types may show light markings from the engraving bit within the engraved area.
  - There is a ghosted image of the engraved area around the outside of the actual engraved area.
    - Remove the nose cone from the engraver/CNC spindle and lightly buff the surface of the nose cone with very fine grit sandpaper or emery cloth to help smooth out any nicks or scratched on the nose cone surface.
    - Set a manual depth setting on the engraver/CNC so that the spindle does not press down as hard onto the surface of the product.
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### **Templates and Images**

- Visit [jpplus.com](http://jpplus.com) to find the product page for this item. The product template may be found under the Tech Docs and Downloads area of the page.

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**To order more of this product, see similar products and much more, please visit [jpplus.com](https://jpplus.com).**

For additional product support and troubleshooting, please contact JPPlus Advanced Support Team:

- Phone: 419-500-4877
- Email: [ast@jpplus.com](mailto:ast@jpplus.com)
- Schedule an appointment: <https://jpplusadvancedsupport.setmore.com/>