Predator Virtual CNC™ - KBA #2300007

Knowledge Base Article for improving CNC verification and simulation

Issue

Can Predator Virtual CNC detect excessive feed rate motion as a collision?

Solution

Yes. Excessive feed rate motion can optionally be detected as a collision. This is especially important when rapid motion is programmed on the CNC with a very fast feed rate. This verification check is also important when CNC program alternates between IPM and IPR. If the user accidentially thinks the CNC is in IPM and utilizes a feed rate when in reality the CNC is in IPR an excessive feed rate motion will occur and possible break the tool if contact is made with the workpiece. To enable Predator Virtual CNC to automatically catch excessive feed rate motion as a collision step through the following.

1. Edit the appropriate machine.
2. Select the Time Params 1 tab.
3. Specify the appropriate Max. Programmed Feed value.
4. Click the OK button to save.
5. Reprocess any jobs to detect excessive feed rates

For example, setting the Max. Programmed Feed value to 1000 will identify any CNC motion that exceeds a feed rate of 1000 to be displayed in red and flagged as a collision within the error log. This value is a global setting and will be honored for any job that utilizes the machine. Different machines can have a different Max. Programmed Feed value. Setting this option to IGNORED will allow any feed rate to be programmed and no excessive feed rate collisions will be identified.

NOTE: Prior to version v5.1.10, Predator Virtual CNC had a hard coded excessive feed rate of 10000 IPM. With the release of v5.1.10 the hard coded limit has been replaced with the configurable Max. Programmed Feed value.

References

Should additional details be required, contact Predator Software via the following:

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The information in this article applies to:

- Predator Virtual CNC v5.1.10
- Predator Virtual CNC v6.x

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