



TITANS
of CNC

ACADEMY

TITAN ROCKET LATHE
REQUIREMENTS & MATERIALS

[ACADEMY.TITANSOFCNC.COM](https://academy.titansofcnc.com)



Academy Requirements & Materials

PART SERIES: **TITAN ROCKET Lathe**
MACHINE TOOL: **2-Axis Turning Lathe**

OVERVIEW:

Everything you need to start teaching the TITANS of CNC: Academy Digital Apprenticeship Program in your classroom, Small Group, or employee training.

SOFTWARE:

- *Minimum*
 - [Autodesk Fusion 360](#)
- *Recommended*
 - [3DEXPERIENCE Solidworks for Makers](#)
 - [Mastercam Educational Multi-Axis Suite](#)

TUTORIALS:

- *CAD*
 - [TITAN ROCKET Lathe in Fusion 360](#)
 - [TITAN ROCKET Lathe in Solidworks](#)
 - [TITAN ROCKET Lathe in Mastercam](#)
- *CAM*
 - [TITAN ROCKET Lathe in Fusion 360](#)
 - [TITAN ROCKET Lathe in Mastercam](#)
- *CNC*
 - [CNC Lathe Fundamentals](#)
 - [TITAN ROCKET Lathe](#)

RELATED FILES:

- Dimensioned Prints
- Operation and Setup Sheets
- First Article Inspection Reports

LATHE SPECIFICATIONS:

- 2-Axis Turning Center
- 10HP Spindle (*Minimum*)

LATHE TOOLING:

- *Machine Setup*
 - Lubricant
 - Torque Wrench Set
 - 2-4lb Dead Blow Hammer
 - Tool Probe¹
- *Workholding*
 - 3-Jaw Chuck (*Minimum*)
 - Collet Chuck (*Recommended*)

TOOLING:

- Tool Holders²
- [TITAN ROCKET LATHE Tool Kit by Kennametal](#)
 - 55° Top Notch OD Turning & Profiling
 - 35° Top Notch OD Turning & Profiling
 - Lay-Down Partial Profile 8-48 Tip OD Threading
 - Part-Off Tool 0.118" Wide
 - OD Full Radius Groover 0.079" Wide
 - OD Groover 0.063" Wide
 - Face Groover 0.0807" Wide
 - Boring Bar ¼" DIA with ¾" Shank
 - ID Groover Micro Bar 1/2"
 - 5/16" Drill for Cut Tap
 - 3/8-16 2B Cut Tap
 - 27/64" Drill for Cut Tap
 - 1/2-13 2B Cut Tap

COOLANT & FILTRATION SYSTEM:

- [Coolant 101 Tutorials](#)
- *Minimum*
 - Coolant
 - Coolant Filtration System
- *Recommended*
 - Through-Coolant

¹ Necessary only if your machine has no machine probe.

² Holder IDs available on the [TITAN ROCKET LATHE Tool List](#).

INSPECTION TOOLS:

- [Inspection 101 Tutorials](#)
- Caliper
- Micrometer
- Go/No-Go Threads
- Rami Gage

STANDARDIZED MATERIAL:

- 4' of 1" 6061 Round Stock per person



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