

# TITAN ROCKET LATHE REQUIREMENTS & MATERIALS

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# **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
  - o Autodesk Fusion 360
- Recommended
  - o 3DEXPERIENCE Solidworks for Makers
  - o Mastercam Educational Multi-Axis Suite

#### **TUTORIALS:**

- CAD
  - o TITAN ROCKET Lathe in Fusion 360
  - TITAN ROCKET Lathe in Solidworks
  - o TITAN ROCKET Lathe in Mastercam
- CAM
  - o TITAN ROCKET Lathe in Fusion 360
  - o <u>TITAN ROCKET Lathe in Mastercam</u>
- CNC
  - o CNC Lathe Fundamentals
  - o <u>TITAN ROCKET Lathe</u>

## **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
  - o Torque Wrench Set
  - o 2-4lb Dead Blow Hammer
  - Tool Probe<sup>1</sup>
- Workholding
  - o 3-Jaw Chuck (*Minimum*)
  - Collet Chuck (Recommended)

#### **TOOLING:**

- Tool Holders<sup>2</sup>
- TITAN ROCKET LATHE Tool Kit by Kennametal
  - o 55° Top Notch OD Turning & Profiling
  - o 35° Top Notch OD Turning & Profiling
  - o Lay-Down Partial Profile 8-48 Tip OD Threading
  - Part-Off Tool 0.118" Wide
  - o OD Full Radius Groover 0.079" Wide
  - o OD Groover 0.063" Wide
  - o Face Groover 0.0807" Wide
  - o Boring Bar ¼" DIA with 3/4" Shank
  - o ID Groover Micro Bar 1/2"
  - o 5/16" Drill for Cut Tap
  - o 3/8-16 2B Cut Tap
  - o 27/64" Drill for Cut Tap
  - o 1/2-13 2B Cut Tap

#### **COOLANT & FILTRATION SYSTEM:**

- Coolant 101 Tutorials
- Minimum
  - Coolant
  - Coolant Filtration System
- Recommended
  - Through-Coolant

<sup>&</sup>lt;sup>1</sup> Necessary only if your machine has no machine probe.

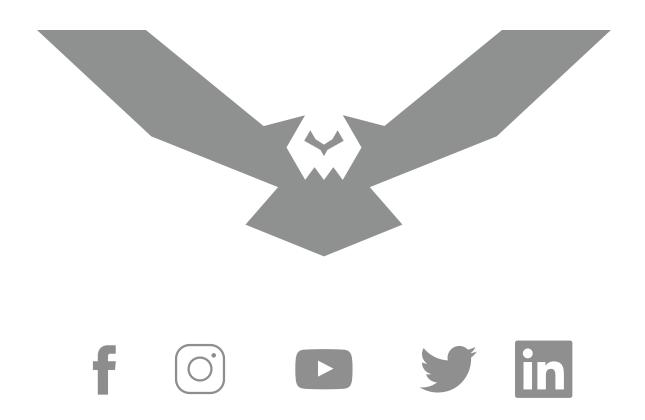
<sup>&</sup>lt;sup>2</sup> Holder IDs available on the TITAN ROCKET LATHE Tool List.

### **INSPECTION TOOLS:**

- Inspection 101 Tutorials
- Caliper
- Micrometer
- Go/No-Go Threads
- Radii Gage

# **STANDARDIZED MATERIAL:**

• 4' of 1" 6061 Round Stock per person



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