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Frequently Asked Questions

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Safe practices should always be employed to ensure the Health and Safety of yourself, employees and customers (if applicable) Refer to product manuals, exploded drawings and our website if further assistance is required, or contact us on service@teknatool.com

How to Check for Runout on NOVA Lathes and Drill Presses

You may be experiencing run-out if any part of the lathe or drill press wobbles or vibrates while spinning.

This is usually caused by parts of the lathe or drill press not being concentric with the spindle axis of rotation. Follow this guide to identify and measure lathe or drill press runout.

You will need a Dial Test Indicator (DTI) with a stand to test for runout. There are 2 types of DTI which are recommended to inspect for runout, but if there is a run out issue present on the product then it can be detected by using any type of DTI.

	
Leverage Dial Test Indicator	Regular Dial Test Indicator

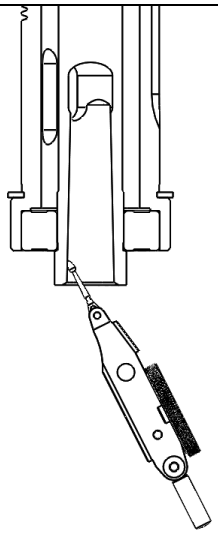
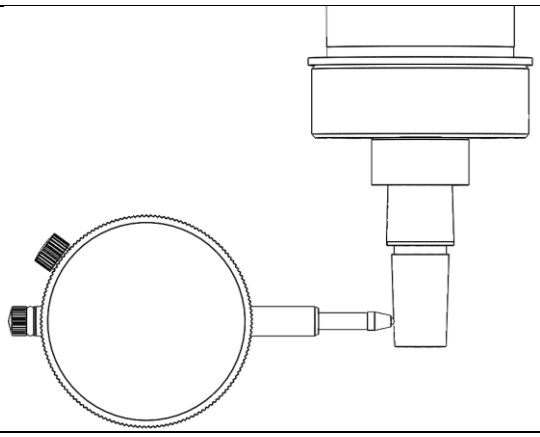
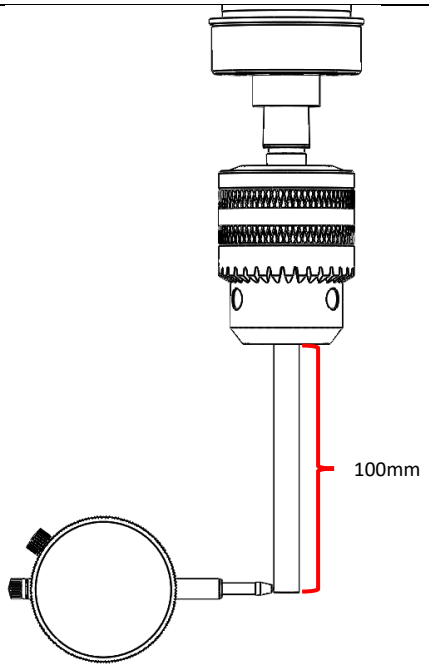
Setting up the DTI:

1	Secure the DTI stand to a stationary surface such as the lathe bed or headstock

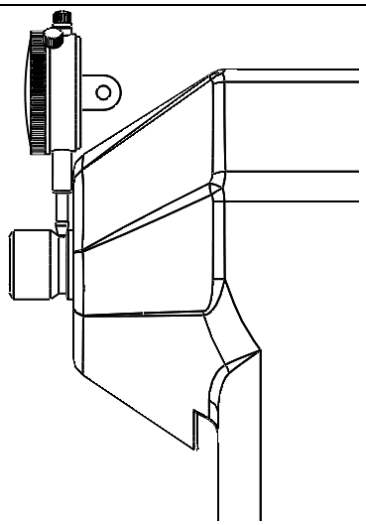
2	Zero the DTI dial bezel to 0. If using a digital DTI, reset the digital counter to 0

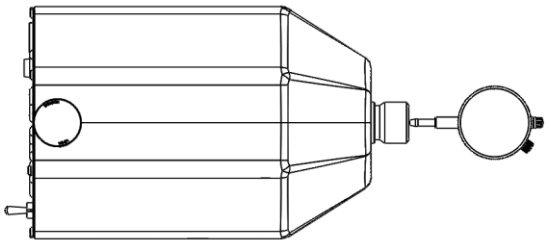
3	Set up the DTI and contact the gauge head to the surface being tested. Ensure that the surface is clean as dust or wood shavings can affect the reading dramatically. Clean the spindle threading, accessory threading, and inner Morse taper surface if applicable.

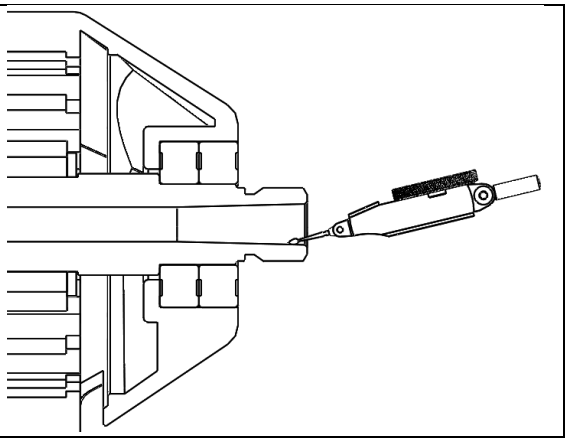
For NOVA Drill Presses:

1	Inside the spindle Morse Taper: This will test will require a leverage DTI. 1. Clean the inside of the Morse Taper to remove any dust that may affect the reading. 2. Position the DTI inside the Morse Taper of the quill as shown. 3. Run the drill press at the slowest speed possible and take the reading The runout measurement should be: **≤0.02mm** Any reading exceeding this value will be exceeding the standard tolerances.	
2	On the end of a MT2-JT33 drill press arbour: Using the drill press chuck Arbor: 1. Rest the DTI gauge perpendicular to the axis of rotation of the tool 2. Run the drill press at the slowest speed possible and take the reading The runout measurement should be: **≤0.04mm** Any reading exceeding this value will be exceeding the standard tolerances.	
3	At a 100mm point from the chuck (On the tool): 1. Attach a 100mm rod or any tool similar to the drill press chuck 2. Locate the DTI perpendicular to the axis of rotation of the tool 3. Run the drill press at the slowest speed possible and take the reading **<u>Note:</u>** When attaching a tool, make sure to use a tool that has no excessive runout when tested with another machine. The runout measurement should be: **≤0.18mm** Any reading exceeding this value will be exceeding the standard tolerances.	

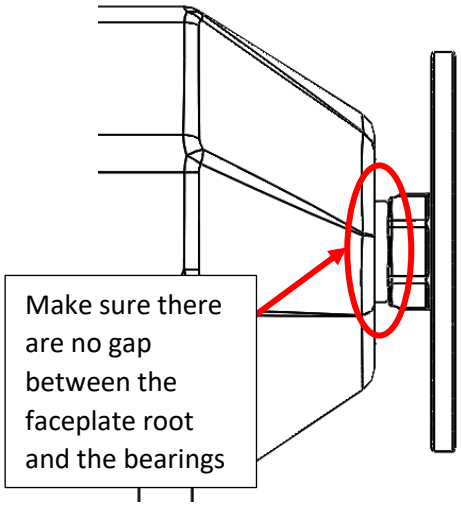
For NOVA Lathes:

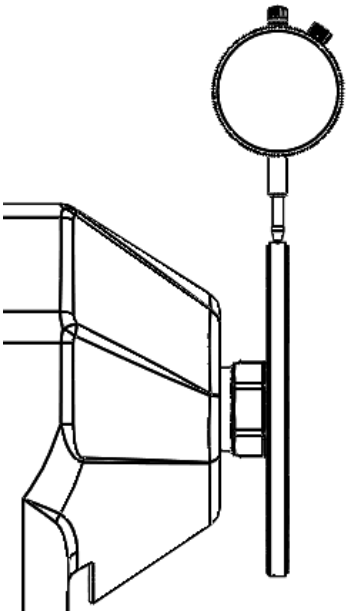
1	Spindle Register: 1. Position the DTI gauge on the register of the spindle as shown in the image 2. Run the lathe at the slowest speed possible The runout measurement should be: **≤0.02mm** Any reading exceeding this value will be exceeding the standard tolerances.	

2	Spindle Face: 1. Position the DTI gauge on the front face of the spindle as shown on the image 2. Run the lathe at the slowest speed possible The runout measurement should be: **≤0.02mm** Any reading exceeding this value will be exceeding the standard tolerances.	

3	Spindle Morse Taper: 1. Place the DTI in a position where it makes contact with the inner surface of the spindle Morse Taper 2. Run the lathe at the slowest speed possible The runout measurement should be: **≤0.02mm** Any reading exceeding this value will be exceeding the standard tolerances	

A **150mm faceplate (FP150L)** is used as the NOVA standard to test if the runout is caused by the spindle thread or the tool which is attached. Before testing, make sure to correctly screw on the face plate:



4	Faceplate Radial Runout: 1. Place the DTI gauge perpendicular to the spindle rotation axis as shown in the image 2. Run the lathe at the slowest speed possible The runout measurement should be: **≤0.13mm** Any reading exceeding this value will be exceeding the standard tolerances.	

5	Faceplate Axial Runout: 1. Position the DTI gauge in the position shown in the image. 2. Run the lathe at the slowest speed possible. The runout measurement should be ranging: **≤0.08mm** Any reading exceeding this value will be exceeding the standard tolerances.