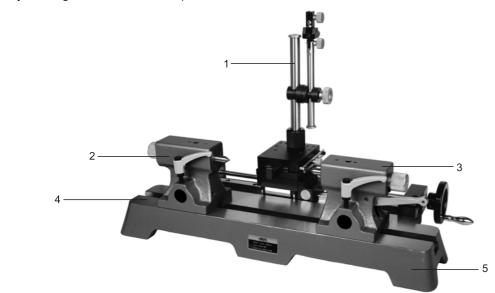


OPERATION INSTRUCTION Bench Center

Accuracy: 0.002mm(Accuracy of circular runout)

0.004mm(Parallelism of the line between two centers to the guide surface)

0.01mm(Accuracy of straightness measurement)



- 1. Bench center with straightness measurement is mainly used to measure cylindrical workpiece's circular runout and straightness.
- 2. Description of each part:

1-Indicator holder 2-Left tailstock 3-Right tailstock 4-Guide surface 5-Base

Left tailstock: Left tailstock can be moved through guide surface, and then fix it with rotating wrench clockwise.

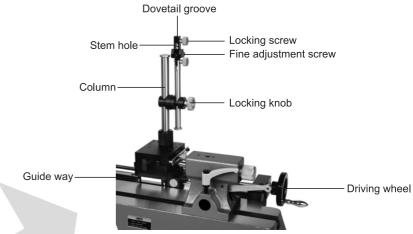
Notice: Lift the wrench, rotate the wrench counterclockwise, put down the wrench, and then rotate wrench clockwise. Do those steps until the left tailstock is fixed.



Right tailstock: Right tailstock can be moved through guide surface, and then fix it with rotating wrench clockwise. Use the wrench the same way as the left wrench. Press the handle to install the workpiece, rotate the adjusting knob to adjust the pressure of thimble, and avoid clamping excessively.

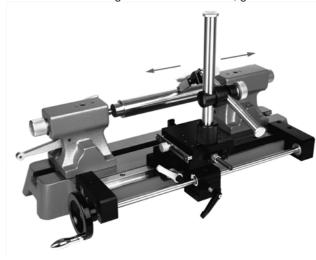


Indicator holder: Clamp the indicator to fix it. Clamp the indicator by dovetail groove or stem hole, fix it with the locking screw. Adjust the indicator with the fine adjustment screw. Loosen the locking knob, arm can be moved through column and rotated freely, adjust appropriately and tighten the locking knob. Rotate driving wheel to move indicator holder, for straightness measurement.



3. Measurement:

- --- It is necessary to clean faces of guide surface, guide way, thimble, workpiece before measurement
- --- Before measurement, move the left tailstock in the appropriate position, and fix it
- --- According the size of the workpiece, move the right tailstock to set the distance, and fix it
- --- Press the handle to install the workpiece and release it, rotate adjusting knob to adjust the pressure appropriately
- Install the indicator, adjust the appropriate position, rotate the workpiece to measure circular runout, get the result from the indicator
- --- Rotate driving wheel to move indicator holder for straightness measurement, get the result from the indicator



4. Notice:

- --- Be careful to control the force applied on the wrench to avoid damaging internal locking device
- --- Tailstocks should be moved carefully, avoid thimbles' collision
- --- Take workpieces down carefully and forbid to drop workpieces on the guide suiface to avoid damaging.
- --- Avoid placing the product in the air with moisture to prevent rustiness, oil it after use
- 5. Optional accessory: Dial test indicator(code: 2880-02, 2897-02)

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