

Vertex 3900-2411

VERTEX 3900-2411 Adjustable Tailstock User Manual

For 8" to 12" Rotary Tables or 8" Indexers

1. INTRODUCTION

This manual provides comprehensive instructions for the proper setup, operation, maintenance, and troubleshooting of the VERTEX Model 3900-2411 Adjustable Tailstock. Designed for precision applications, this tailstock is compatible with 8-inch to 12-inch rotary tables and 8-inch indexers, enhancing stability and accuracy during machining operations.

Please read this manual thoroughly before using the tailstock to ensure safe and efficient operation and to maximize the lifespan of your equipment.

2. PRODUCT OVERVIEW

The VERTEX 3900-2411 Adjustable Tailstock (Vertex # TS3) is a robust accessory designed to provide support for long workpieces during machining on rotary tables or indexers. Its adjustable design allows for versatile positioning and secure clamping.



Figure 2.1: Front view of the tailstock, highlighting its sturdy cast iron base and precision-machined components.



Figure 2.2: Side view of the tailstock, illustrating its compact design and the robust clamping system.



Figure 2.3: Angled view, showcasing the tailstock's overall construction and finish.

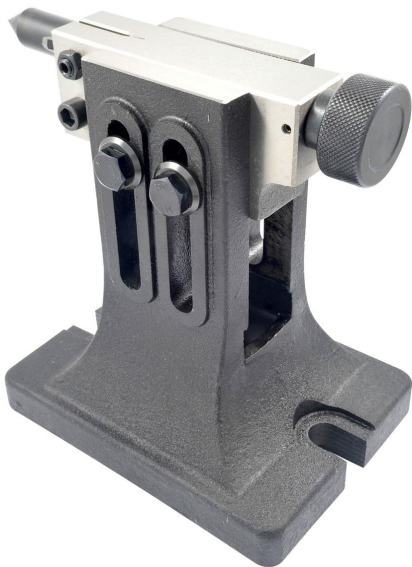


Figure 2.4: Rear view, detailing the mounting slots and the spindle adjustment knob.

3. SETUP AND INSTALLATION

Proper setup is crucial for the tailstock's performance and safety. Follow these steps carefully:

1. **Unpacking:** Carefully remove the tailstock from its packaging. Inspect for any shipping damage. Report any damage to your supplier immediately.
2. **Cleaning:** Clean all protective coatings and any debris from the tailstock using a suitable degreaser. Apply a light coat of machine oil to all unpainted surfaces to prevent rust.
3. **Mounting:**
 - Position the tailstock on the T-slots of your rotary table or indexer.

- Align the tailstock with the center of the rotary table.
 - Secure the tailstock using appropriate T-nuts and bolts (not included) through the base slots. Ensure it is firmly clamped to prevent movement during operation.
4. **Height Adjustment:** The tailstock features an adjustable center height. Loosen the clamping bolts on the side of the tailstock body to adjust the height. Adjust until the center point aligns with the center of your workpiece or rotary table. Tighten the clamping bolts securely once the desired height is achieved.
 5. **Spindle Adjustment:** The spindle can be extended or retracted using the knurled knob at the rear. Ensure the spindle is retracted before mounting a workpiece.

4. OPERATING INSTRUCTIONS

The VERTEX 3900-2411 tailstock is designed for straightforward operation:

1. **Workpiece Mounting:**
 - Ensure the workpiece is securely mounted in the chuck or fixture of your rotary table/indexer.
 - Carefully bring the tailstock into position so that its center point aligns with the center of the workpiece.
 - Extend the tailstock spindle using the knurled knob until it firmly supports the workpiece. Do not overtighten.
 - Lock the tailstock spindle in place using the spindle lock lever or knob, if present.
2. **Machining:** With the workpiece securely supported by both the rotary table and the tailstock, you can proceed with your machining operations. The tailstock provides additional rigidity, reducing vibration and improving surface finish and accuracy.
3. **Workpiece Removal:** After machining, retract the tailstock spindle by loosening its lock and turning the knurled knob. Carefully remove the workpiece from the rotary table.

Safety Note: Always ensure the tailstock is securely clamped to the rotary table and the spindle is locked before beginning any machining operation. Wear appropriate personal protective equipment (PPE).

5. MAINTENANCE

Regular maintenance will ensure the longevity and optimal performance of your VERTEX tailstock:

- **Cleaning:** After each use, clean the tailstock to remove chips, dust, and coolant residue.
- **Lubrication:** Periodically apply a light machine oil to all moving parts, including the spindle and height adjustment mechanisms, to ensure smooth operation and prevent corrosion.
- **Inspection:** Regularly inspect the tailstock for any signs of wear, damage, or loose components. Pay close attention to the spindle, clamping bolts, and base.
- **Storage:** When not in use, store the tailstock in a clean, dry environment to prevent rust and damage.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Tailstock slides during operation.	Mounting bolts are loose.	Tighten mounting bolts securely. Ensure T-nuts are properly seated.
Spindle does not extend/retract smoothly.	Lack of lubrication or debris.	Clean spindle and apply machine oil. Check for any obstructions.
Difficulty adjusting tailstock height.	Clamping bolts are too tight or mechanism is dirty.	Loosen height clamping bolts. Clean and lubricate the adjustment mechanism.
Excessive vibration during machining.	Workpiece not properly supported or tailstock not rigid.	Ensure workpiece is firmly held by both chuck and tailstock. Verify all tailstock clamps are tight.

7. SPECIFICATIONS

The VERTEX 3900-2411 Adjustable Tailstock is designed with the following specifications:

- **Model Number:** 3900-2411 (Vertex # TS3)
- **Compatibility:** 8" to 12" Rotary Tables, 8" Indexers
- **Product Dimensions:** 8 x 12 x 8 inches (approximate)
- **Item Weight:** 17.56 Pounds (approximate)
- **Country of Origin:** Taiwan
- **Adjustable Center Height:** Refer to product diagrams for specific ranges.

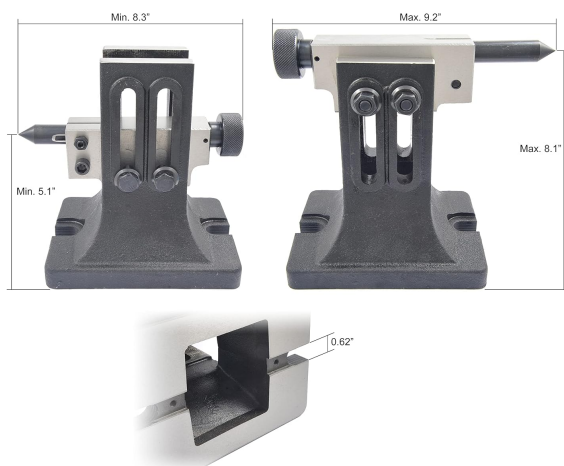


Figure 7.1: Imperial Dimensions. Minimum height 5.1", Maximum height 8.1", Minimum length 8.3", Maximum length 9.2".

3900-2411

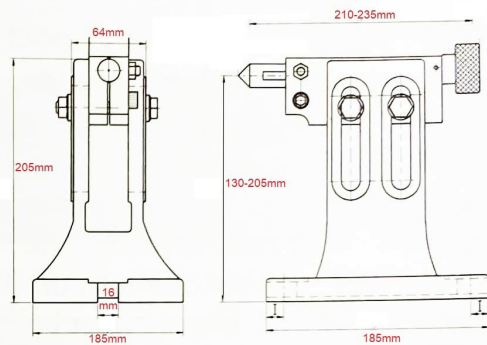


Figure 7.2: Metric Dimensions. Height range 130-205mm, Length range 210-235mm.

ROTARY TABLES & ACCESSORIES

Pro-Series HORIZONTAL/VERTICAL ROTARY TABLES

- 10 second vernier reading.
- Gear ratio P21.
- One rotation of handle equals 4° on collar.

Item	Table Size (in)	Weight-over-all (lb)	Center Hole (in)	Center Height (in)	Number of T-slots	T-slot (in)	N	E	Weight (lb)
3900-2314	4.3"	2.8	5.4	2M.T.	3	.43	2.3	4.7	17
3900-2316	6"	3.1	8.1	2M.T.	3	.43	3.1	6.4	28
3900-2328	8"	4.1	10.4	2M.T.	3	.55	3.9	8.6	40
3900-2330	10"	4.5	12.6	2M.T.	6	.55	4.2	10.9	83
3900-2332	12"	5.3	15.3	4M.T.	7	.63	4.8	13.0	134

Pro-Series DIVIDING PLATES

- Suitable for Pro-Series rotary tables.
- Set includes: Index plates, crank handle, 300 screws, sector & U washer.

Item	Fits Rotary Table (in)	Plate Material	Plate Size (in)
3900-2390	4 & 6"	SET I	
3900-2392	8"	SET II	
3900-2394	10 & 12"	SET III	
3900-2396	6 & 8"	SET IV	

ADJUSTABLE TAILSTOCKS

Item	Fits Table	Origin	Center Height (in)
3900-2404	4"	China	2.7"
3900-2407	4 & 6"	Taiwan	3.2 & 4.3"
3900-2409	6 & 8"	Taiwan	4.5 & 5.7"
3900-2402	8 & 10"	China	5.5 & 7.5"
3900-2411	8, 10 & 12"	Taiwan	5.2 & 8.1"
3900-2403	12"	China	7.5 & 9.0"

FLANGES

- For front mount.
- For adapting a chuck to rotary table.
- Compatible with Pro-Series rotary tables, holes pattern may need to be modified for non Pro-Series.

Item	Chuck Size (in)	Used For Table (in)	Weight (lb)
3900-2352	5	4 & 6"	5.43
3900-2355	6	6 & 8"	6.68
3900-2358*	7	8 & 10"	7.68
3900-2360	8	10 & 12"	8.27

3-JAW FRONT-MOUNT SELF-CENTER CHUCKS FOR ROTARY TABLES

- Plain back.
- Made of high quality steel.
- Hardened and ground.
- Lathe chuck wrench supplied.

TOP JAWS REVERSIBLE

Front mount chucks are designed to be used with rotary tables and other devices whose back mounting chucks can not be used.

Item	Chuck Size (in)	Weight (lb)	Center Hole (in)	Mount Thread (in)
3900-3430	6"	5.51	4.92	2.40
3900-3432	8"	6.15	6.30	3.10
3900-3434	10"	8.82	7.87	3.42
3900-3436	12"	11.26	10.24	3.86

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Figure 7.3: Excerpt from product sheet confirming model 3900-2411 compatibility and specifications.

8. WARRANTY INFORMATION

For specific warranty details regarding your VERTEX 3900-2411 Adjustable Tailstock, please refer to the warranty card included with your product or contact Vertex customer service directly. Typically, Vertex products come with a limited warranty covering manufacturing defects under normal use conditions. Keep your proof of purchase for any warranty claims.

9. CUSTOMER SUPPORT

If you require further assistance, have questions about your tailstock, or need to report an issue, please contact Vertex customer support:

- **Manufacturer:** Vertex
- **Online Support:** Visit the official Vertex website for FAQs, product information, and contact forms.
- **Retailer Support:** For purchase-related inquiries, contact the retailer where you purchased the product.

For more information about Vertex products, you can visit the [Vertex Store on Amazon](#).

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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