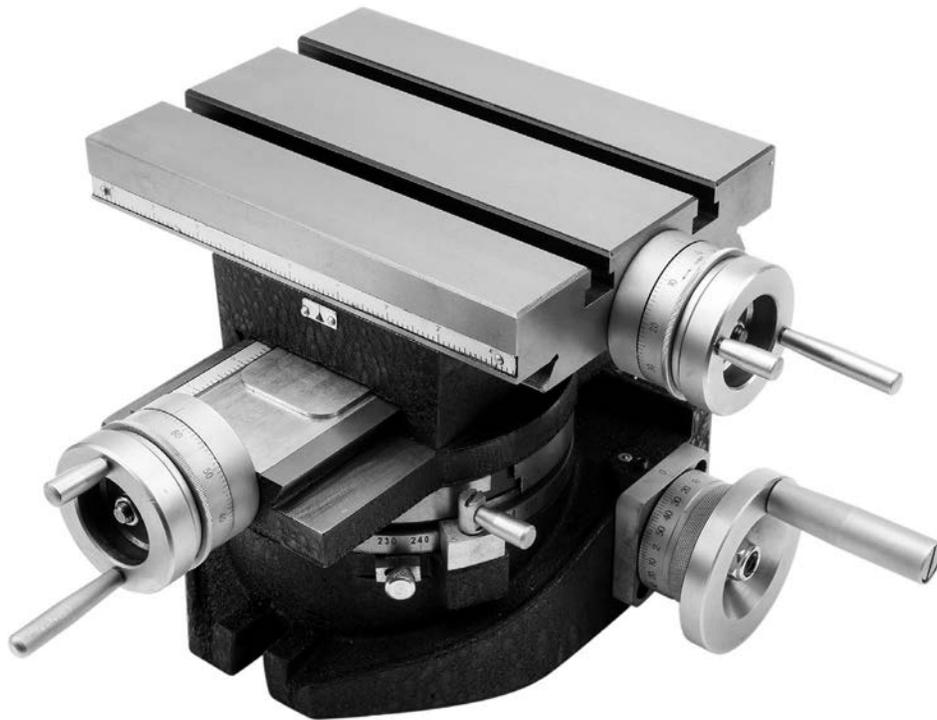


Grizzly **Industrial, Inc.**®

MODEL T1243 CROSS-SLIDE ROTARY TABLE 7" X 9" OWNER'S MANUAL *(For models manufactured since 02/18)*



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**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**
#KB19355 PRINTED IN CHINA

V1.05.18

 **WARNING!**

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

 **WARNING!**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Table of Contents

- INTRODUCTION..... 2**
 - Manual Accuracy..... 2
 - Machine Data Sheet..... 2
 - Contact Info..... 2
 - Machine Description..... 3
 - Identification..... 3
 - Controls & Components..... 4

- SECTION 1: SAFETY..... 5**
 - Safety Instructions for Machinery..... 5

- SECTION 2: SETUP..... 6**
 - Unpacking..... 6
 - Needed for Setup..... 6
 - Inventory..... 6
 - Assembly..... 7

- SECTION 3: OPERATIONS..... 8**
 - Operation Overview..... 8
 - Rotary Table Movement..... 8
 - Adjusting Handwheel Scale..... 9
 - Adjusting Indexing Scale..... 9
 - Mounting Table Horizontally..... 9
 - Mounting Table Vertically..... 11
 - Aligning Workpiece with Mill Spindle..... 12
 - Aligning Table with Mill Machine X-Axis..... 12
 - Angular Indexing..... 13

- SECTION 4: ACCESSORIES..... 14**

- SECTION 5: MAINTENANCE..... 17**
 - Schedule..... 17
 - Cleaning & Protecting..... 17
 - Lubrication..... 17
 - Adjusting Gibs..... 19

- SECTION 6: PARTS..... 20**
 - T1243 Parts..... 20

- WARRANTY & RETURNS..... 25**

INTRODUCTION

Manual Accuracy

We are proud to offer this document with your new machine! We've made every effort to be exact with the instructions, specifications, drawings, and photographs of the machine we used when writing this manual. However, sometimes we still make an occasional mistake.

Also, owing to our policy of continuous improvement, **your machine may not exactly match the manual.** If you find this to be the case, and the difference between the manual and machine leaves you in doubt, immediately call our technical support for updates or clarification.

For your convenience, we post all available documentation on our website at **www.grizzly.com**. Any updates to this document will be reflected on our website as soon as complete.

Contact Info

We stand behind our machines! If you have questions or need help, contact us with the information below. Before contacting, make sure you get the **serial number** and **manufacture date** from the machine ID label. This will help us help you faster.

Grizzly Technical Support
1815 W. Battlefield
Springfield, MO 65807
Phone: (570) 546-9663
Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com



MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

MODEL T1243 CROSS-SLIDE ROTARY TABLE 7 X 9"

Worm Gear Ratio.....	90:1
Table Rotation	360°
Rotary Table Rotation Per Handwheel Revolution.....	4°
Handwheel Scale Resolution (Smallest Indicated Adjustment).....	0.001"
Table Size.....	7" x 9"
Table T-Slots.....	7/16"
Table Height	7 1/2"
X-Axis Table Travel.....	4 1/4"
Y-Axis Table Travel.....	4 3/4"
Base Footprint (Horizontal/Vertical).....	8" L x 7 1/2" W (Horizontal), 7 1/2" L x 7 1/2" W (Vertical)
Overall Width (Side-to-Side).....	15"
Overall Depth (Front-to-Back)	12 3/4"
Full Range of Movement Width	15"
Full Range of Movement Depth.....	20"
Weight	60 lbs.



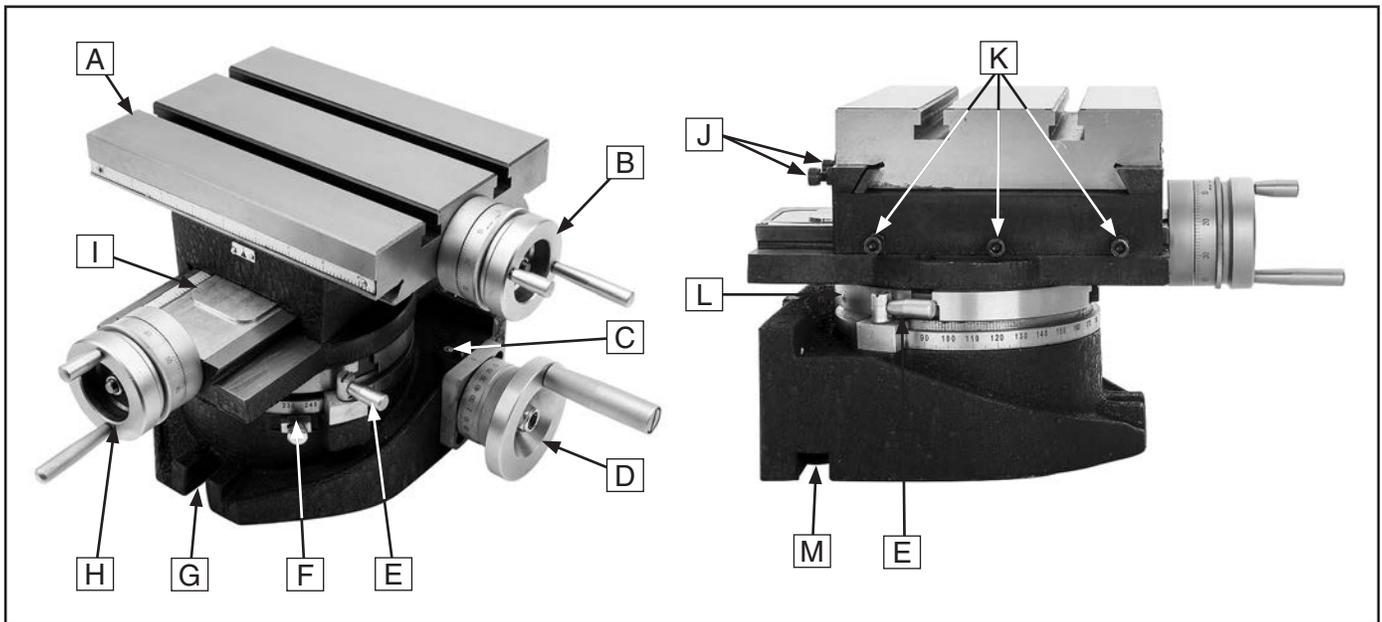
Machine Description

The T1243 Cross-Slide Rotary Table allows users to perform milling operations up to 360° around a fixed axis, as well as move up to 4" along both the X and Y axes. Three handwheels control rotation and table movement.

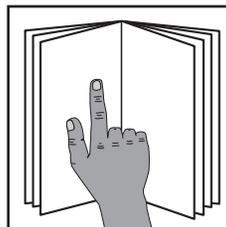
The T1243 can be mounted horizontally or vertically on a mill-drill table. The supplied T-bolts and hold-down clamps are designed to work with milling machine tables that have 7/16" or 1/2" T-slots.

Identification

Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.



- A. Table
- B. X-Axis Handwheel w/Graduated Scale
- C. Ball Oiler for Rotary Table Leadscrew
- D. Rotary Table Handwheel w/Graduated Scale
- E. Rotary Table Locks
- F. Rotary Table Degree Scale and Adjustable Indicator
- G. Horizontal Mounting Slot
- H. Y-Axis Handwheel w/Graduated Scale
- I. Y-Axis Leadscrew Cover
- J. X-Axis Gib Adjustment Screws (2 of 3)
- K. Y-Axis Gib Adjustment Screws
- L. Ball Oiler for Rotary Table Worm Gear
- M. Vertical Mounting Slot (1 of 2)

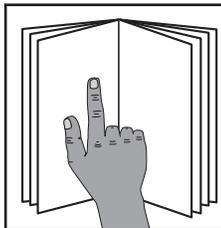


!WARNING

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.



Controls & Components



! WARNING

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.

Refer to the following figures and descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and minimize your risk of injury when operating this machine.

- A. Y-Axis Handwheel w/Graduated Scale:** Moves table forward and backward when handwheel is perpendicular to rotary table handwheel (F) as shown; moves table side to side on X-axis when handwheel is parallel with rotary table handwheel. One full turn of the handwheel moves the table 0.1".
- B. Y-Axis Leadscrew Cover:** Protects leadscrew from debris and provides access for lubrication.
- C. Table T-Slots:** Are used to secure a workpiece to the table with $\frac{7}{16}$ " or 10mm fasteners.
- D. X-Axis Handwheel w/Graduated Scale:** Moves table side to side when handwheel is parallel with rotary table handwheel (F) as shown; moves table forward and backward on Y-axis when handwheel is perpendicular to rotary table handwheel. One full turn of the handwheel moves the table 0.1".
- E. Ball Oilers:** Are used to lubricate the rotary table leadscrew and worm gear.
- F. Rotary Table Handwheel w/Graduated Scale:** Rotates the table through a full 360° rotation. One full rotation of the handwheel turns the table 4°.

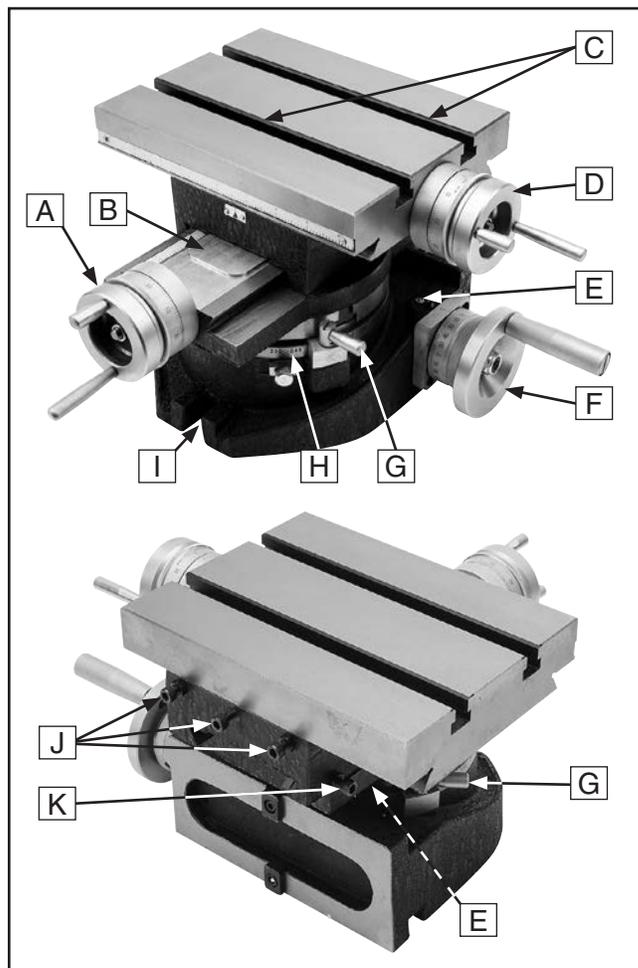


Figure 1. T1243 controls and components.

- G. Rotary Table Locks:** Lock the table in place. This reduces the stress on the worm and spur gear interface and helps ensure the table does not change position during heavy machining operations.
- H. Rotary Table Degree Scale:** Graduated in whole degrees for rotational table positioning.
- I. Horizontal Mounting Slot:** Use to attach T1243 to milling machine table with T-bolt.
- J. Table Gib Adjustment Screws:** Provide adjustment for play in the table without causing the slides to bind.
- K. Cross Slide Gib Adjustment Screw (1 of 3):** Provides adjustment for play in the cross slide without causing the slides to bind.



SECTION 1: SAFETY

For Your Own Safety, Read Instruction Manual Before Operating This Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures. Always use common sense and good judgment.

 **DANGER** Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

 **WARNING** Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE This symbol is used to alert the user to useful information about proper operation of the machine.

Safety Instructions for Machinery

WARNING

OWNER'S MANUAL. Read and understand this owner's manual **BEFORE** using machine.

TRAINED OPERATORS ONLY. Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make your workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

ELECTRICAL EQUIPMENT INJURY RISKS. You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

DISCONNECT POWER FIRST. Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are **NOT** approved safety glasses.



SECTION 2: SETUP

Unpacking

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. ***If items are damaged, please call us immediately at (570) 546-9663.***

IMPORTANT: Save all packaging materials until you are completely satisfied with the machine and have resolved any issues between Grizzly or the shipping agent. ***You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.***



Needed for Setup

The following items are needed, but not included, for the setup/assembly of this machine.

Description	Qty
• Safety Glasses	1
• Screwdriver Flat Head #2.....	1

Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Box 1 (Figure 2)	Qty
A. Cross-Slide Rotary Table (Not Shown)	1
B. Hold-Down Clamps	3
C. T-Bolts	3
D. Handwheel Handle	1
E. Shoulder Screw	1
F. Fixed Handles 58mm	2
G. Fixed Handles 38mm	2
H. Flat Washers 10mm	3
I. Hex Nuts M10-1.5	3

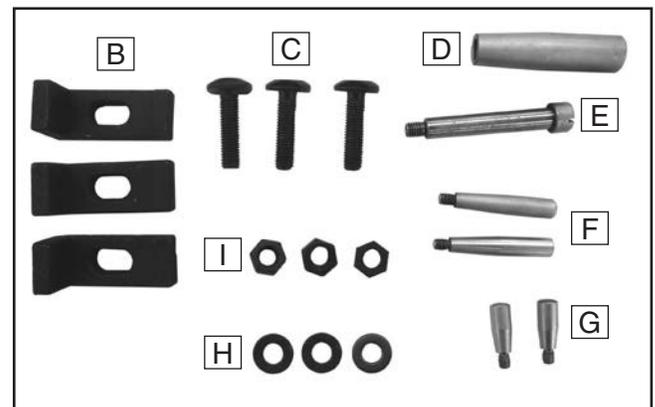


Figure 2. T1243 inventory.

NOTICE

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.



Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, refer to **Needed for Setup** and gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

The T1243 Cross-Slide Rotary Table comes fully assembled except for the handwheel handles.

Items Needed	Qty
Flat Head Screwdriver #2.....	1

To assemble machine:

1. Insert shoulder screw into handwheel handle, then attach shoulder screw to 3" rotary table handwheel as shown in **Figure 3**.

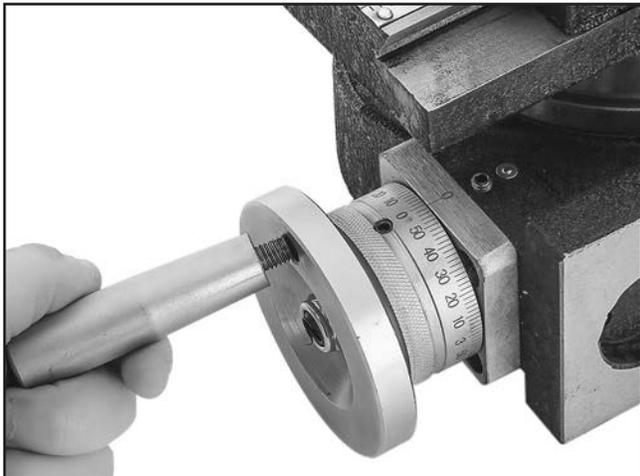


Figure 3. Installing shoulder screw and handle without shaft into rotary table handwheel.

2. Thread (1) fixed handle 38mm and (1) fixed handle 58mm into X-axis and Y-axis handwheels (see **Figure 4**). Hand tighten.

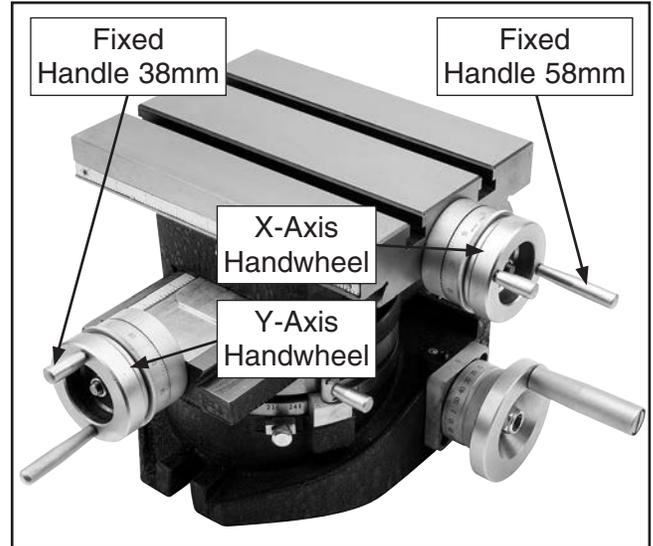


Figure 4. Fixed handles installed on X- and Y-axis handwheels.

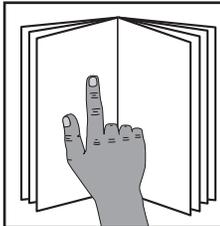


SECTION 3: OPERATIONS

Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.

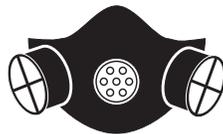


!WARNING

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.

!WARNING

To reduce risk of eye injury from flying chips or lung damage from breathing dust, always wear safety glasses and a respirator when operating this machine.



NOTICE

If you are not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

Rotary Table Movement

The T1243 rotary table rotates by turning the 3" handwheel, which is attached to a precision worm gear engaged with a worm wheel. The ratio between these gears is 90:1, which means one complete turn of the handwheel rotates the table 4° (see **Figure 5**).

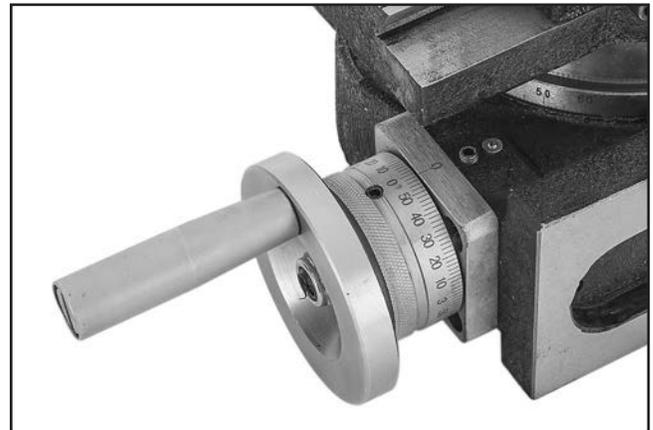


Figure 5. Rotary table handwheel and scale.

To maximize rigidity during operation, the rotary table has two table locks (see **Figure 6**). Tightening the levers locks the table in place.

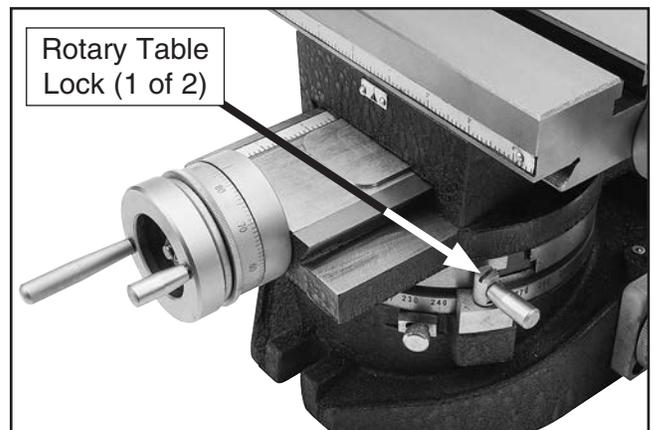


Figure 6. Rotary table lock.

To minimize finish problems associated with gear backlash when cutting circular slots, lightly tighten the locks to create extra drag.



Adjusting Handwheel Scale

The rotary table scale collar is marked in whole degrees and has a resolution of 1 arc second ($\frac{1}{60}$ of 1°). For every full rotation of the handwheel, the indexing scale on the rotary table moves 4° .

The handwheel scale (see **Figure 7**) can be repositioned without rotating the handwheel. This helps when aligning all of the zeroes at the beginning of a job.

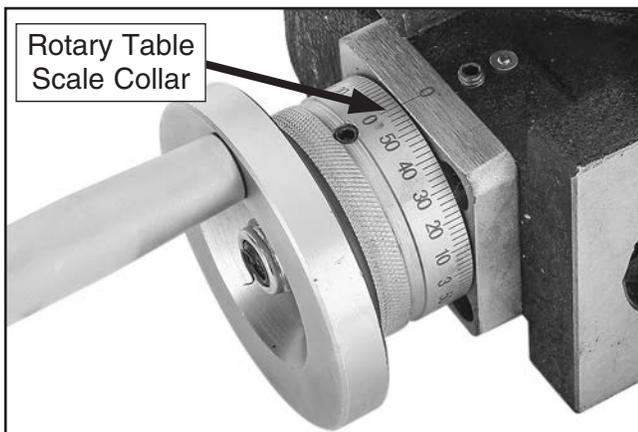


Figure 7. Rotary table scale collar index.

Items Needed	Qty
Hex Wrench 3mm.....	1

1. To adjust collar, loosen set screw (see **Figure 8**) securing collar to handwheel, then rotate collar to desired alignment.

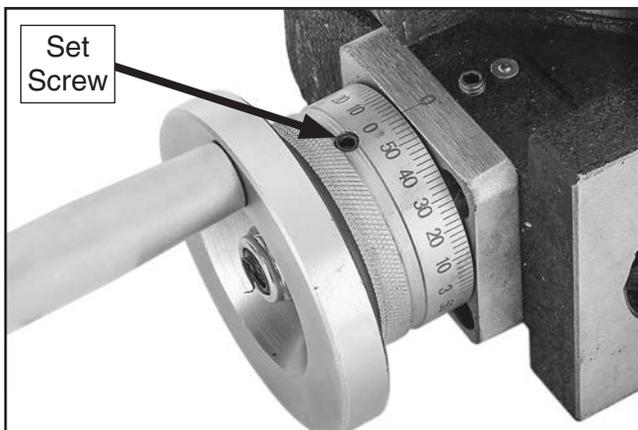


Figure 8. Location of collar set screw.

2. When finished, tighten set screw to secure collar.



Adjusting Indexing Scale

The degree scale is marked on the edge of the rotary table in 1° increments (see **Figure 9**). The zero point can be synchronized with the handwheel to start the table indexing at 0° by using the index marker as a starting point.

The index marker position for the rotary table can be adjusted within $\pm 2.5^\circ$ by loosening the thumbscrew and moving the marker.

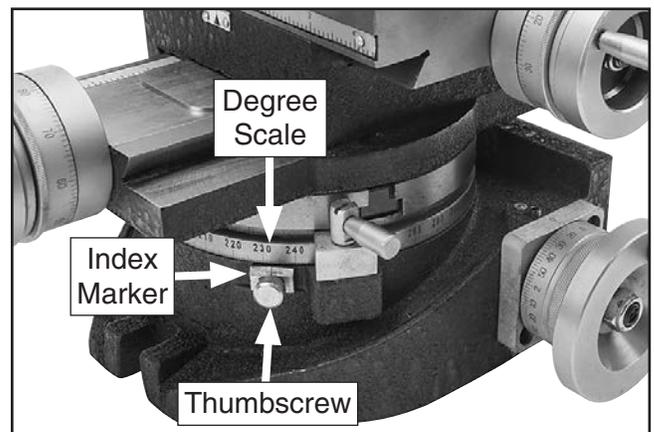


Figure 9. Location of degree scale.

Mounting Table Horizontally

The T1243 comes with (3) M10-1.5 x 60 T-bolts, (3) M10-1.5 hex nuts, (3) 10mm flat washers, and (3) hold-down clamps for mounting horizontally to a milling machine table. Use the supplied hardware to mount the T1243 to milling machine tables with spacing up to 4" on center between $\frac{7}{16}$ " or $\frac{1}{2}$ " T-slots.

NOTICE

To mount the T1243 to tables with T-slots spaced wider than 4" on center, or with T-slots wider than $\frac{1}{2}$ ", use step blocks and clamps (available separately).

Before mounting the T1243 cross-slide rotary table to your milling machine table, verify alignment of your mill table and mill spindle. Refer to your mill manual for this procedure.

Use shop rags and mineral spirits to clean the mating surfaces of the T1243 and the mill table.

Items Needed	Qty
T-Bolts M10-1.5 x 60mm.....	3
Hex Nuts M10-1.5	3
Flat Washers 10mm	3
Hold-Down Clamps	As Needed
Open-End Wrench 17mm.....	1
Hex Wrench 5mm.....	1

To mount T1243 horizontally:

1. DISCONNECT MACHINE FROM POWER!
2. Move (2) T-slot keys and (2) cap screws from side slots to bottom slot (see **Figure 10**).

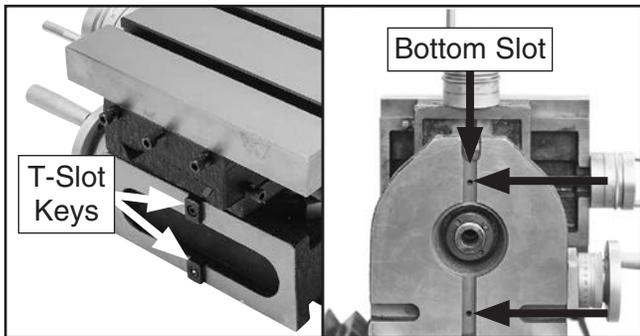


Figure 10. T-slot keys and mounting locations.

3. Insert (1) T-bolt in T-slot of milling machine table, then align T-bolt with T1243 mounting slot, as shown in **Figure 11**. Attach (1) 10mm flat washer and (1) M10-1.5 hex nut finger-tight.

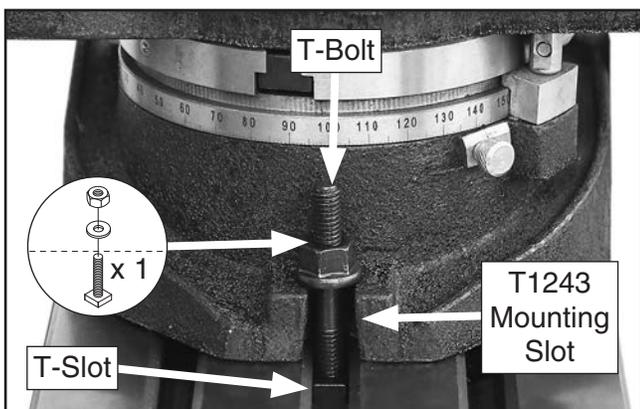


Figure 11. Initial horizontal mounting of T1243.

Note: The T1243 may also be installed using (1) T-bolt, (1) flat washer, (1) hex nut, and (1) hold-down clamp, as shown in **Figure 12**.

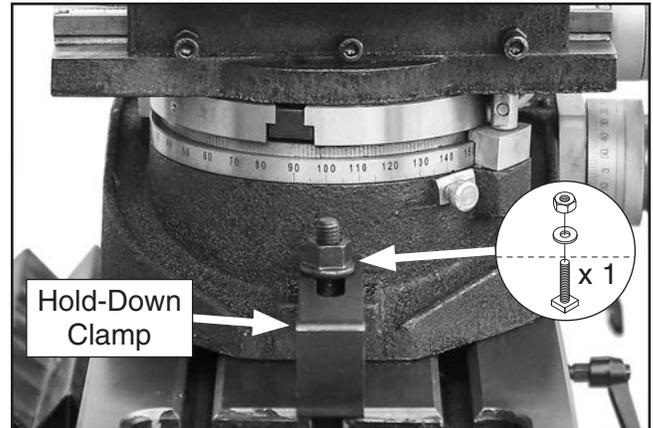


Figure 12. T1243 mounted with hold-down clamp.

4. Insert (1) T-bolt into each milling table outer T-slot, then install (1) hold-down clamp, (1) 10mm flat washer, and (1) M10-1.5 hex nut onto each T-bolt, as shown in **Figure 13**.

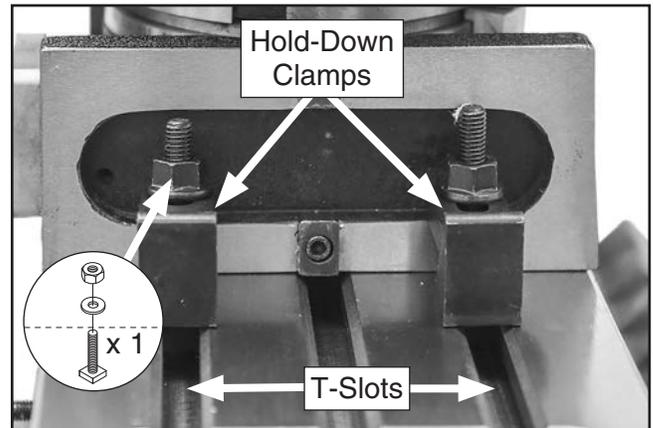


Figure 13. T1243 mounted using hold-down clamps, T-bolts, flat washers, and hex nuts.

⚠ CAUTION

Make sure cross-slide rotary table is secured to milling table. Check T-bolts and clamps for tightness before each cutting operation. If cross-slide rotary table is not secured, serious personal injury and damage to your mill and cross-slide rotary table could result.

5. Tighten hex nuts. Ensure T1243 is rigidly attached to milling table to increase accuracy, efficiency, and general safety.



Mounting Table Vertically

The T1243 has two slots for vertical mounting using hold-down clamps (see **Figure 14**). Your milling machine table will need three $\frac{7}{16}$ " or $\frac{1}{2}$ " T-slots, with the outer T-slots on 5" – 6 $\frac{1}{2}$ " centers to use the supplied T-bolts and hold-down clamps.

Note: The T1243 can be vertically mounted directly to a machine table, but its table rotation will be limited. For full 360° rotation, place two parallel step blocks (not included) at least 1" tall under the T1243 before mounting to the machine table.

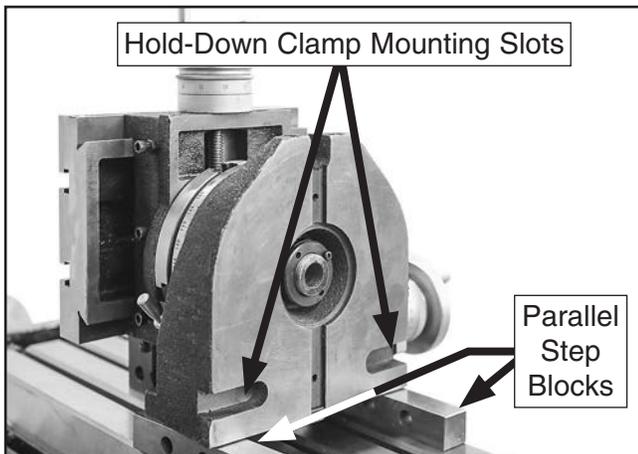


Figure 14. T1243 vertical mounting alignment.

NOTICE

To vertically mount T1243 to milling machine tables with T-slots narrower than 5" or wider than 6 $\frac{1}{2}$ " on center, or with T-slots wider than $\frac{1}{2}$ ", use step blocks and clamps (not included).

Items Needed	Qty
T-Bolts M10-1.5 x 60.....	2
Hex Nuts M10-1.5.....	2
Flat Washers 10mm.....	2
Hold-Down Clamps.....	2
Open-End Wrench 17mm.....	1
Step Blocks (Not Included).....	2
Accessory Step Clamps (Not Included).....	2

To mount T1243 vertically:

1. DISCONNECT MACHINE FROM POWER!
2. Rotate T1243 Y-axis forward so rotating table clears milling machine table.
3. Place T1243 on milling machine table with T-slot key in middle T-slot.

Note: For full 360° table rotation, place T1243 on (2) parallel blocks at least 1" tall.

4. Insert (1) M10-1.5 x 60 T-bolt in each milling machine table T-slot.
5. Install (1) hold-down clamp (or (1) accessory step clamp), (1) 10mm flat washer, and (1) M10-1.5 hex nut on each T-bolt (see **Figure 15**), then tighten securely. Holding cross-slide rotary table rigid will help with accuracy, efficiency, and general safety.

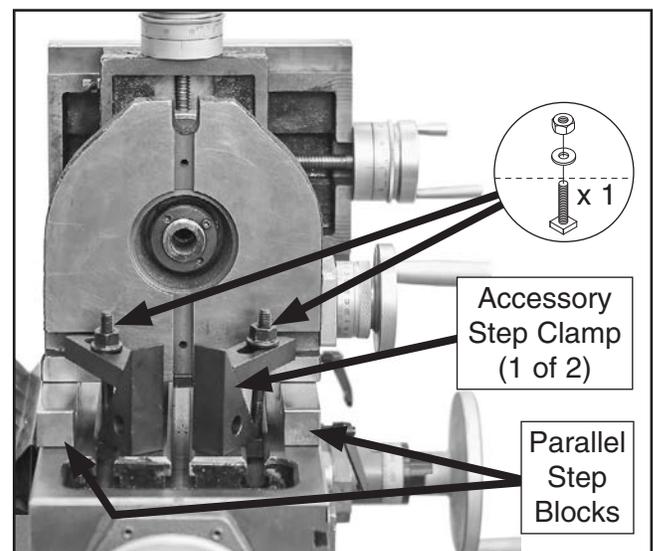


Figure 15. T1243 secured to milling machine table using parallel step blocks.

CAUTION

Make sure cross-slide rotary table is secured to milling table. Check T-bolts and clamps for tightness before each cutting operation. If cross-slide rotary table is not secured, serious personal injury and damage to your mill and cross-slide rotary table could result.



Aligning Workpiece with Mill Spindle

There are many ways to align the mounted workpiece with the mill spindle. Review the suggestions below, then use your best judgment based on your experience and skills to select the correct method for your operation.

Items Needed	Qty
Dial Indicator with Magnetic Base	1
Precision Mandrel or Drill Rod	1
Edge Finder	1
Precision Square	1

To align T1243 with mill spindle:

1. Mount T1243 horizontally on mill table under spindle (see **Mounting Table Horizontally** on **Page 9**).
2. Position dial indicator with magnetic base beside T1243, as shown in **Figure 16**.

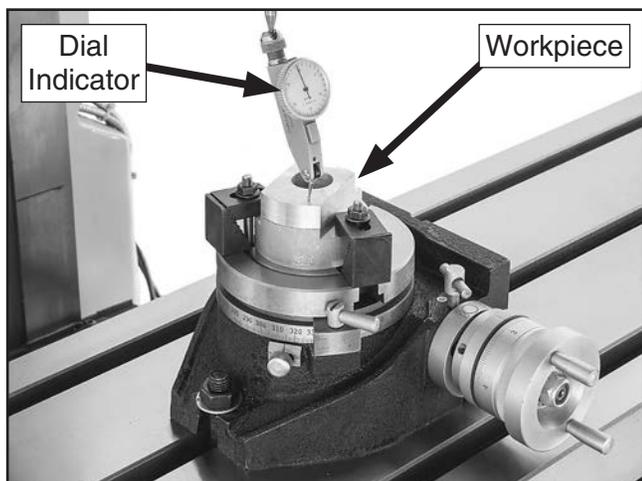


Figure 16. Example of aligning workpiece using a dial indicator.

3. Indicate inside or outside of workpiece, then turn rotary table handwheel while watching indicator dial.

Note: For accurate indicator results, turn rotary table handwheel in just one direction to eliminate any pinion backlash.

4. Adjust workpiece on table until there is zero runout when table and workpiece are rotated, then securely clamp workpiece to T1243 table.
5. Mount dial indicator in mill spindle using a collet or chuck.
6. Indicate workpiece key feature, then rotate mill spindle by hand in just one direction while watching indicator dial.
7. Adjust mill table until indicator dial reads zero runout throughout rotation of spindle.

Tip: Use a mirror to aid in reading test indicator as it rotates away from you.

Note: If your workpiece is large enough, it may be easier to use an edge finder instead of a dial indicator.

Aligning Table with Mill Machine X-Axis

The T1243 should be aligned with the X-axis of the milling machine. Mount the T1243 vertically to the mill table using the supplied T-bolts and hold-down clamps, or with parallel step blocks and accessory step clamps (not included) (see **Mounting Table Vertically** on **Page 11**).

NOTICE

To vertically mount T1243 to milling machine tables with T-slots narrower than 5" or wider than 6½" on center, or with T-slots wider than ½", use accessory step blocks and clamps (not included).

Items Needed	Qty
Dial Indicator	1
Hold-Down Clamps	2
Parallel Step Blocks (Not Included).....	2
Accessory Step Clamps (Not Included)	2



To align T1243 with milling machine X-axis:

1. Place parallel step blocks on mill table.
2. Place T1243 vertically on step blocks so that table sits beneath milling machine spindle, as shown in **Figure 17**. Mount T1243 to mill table with T-bolts and hold-down clamps. Finger-tighten fasteners.
3. Install dial indicator in milling machine spindle, then use dial indicator to indicate one side of face or back of a workpiece mounted on T1243 table (see **Figure 17**).

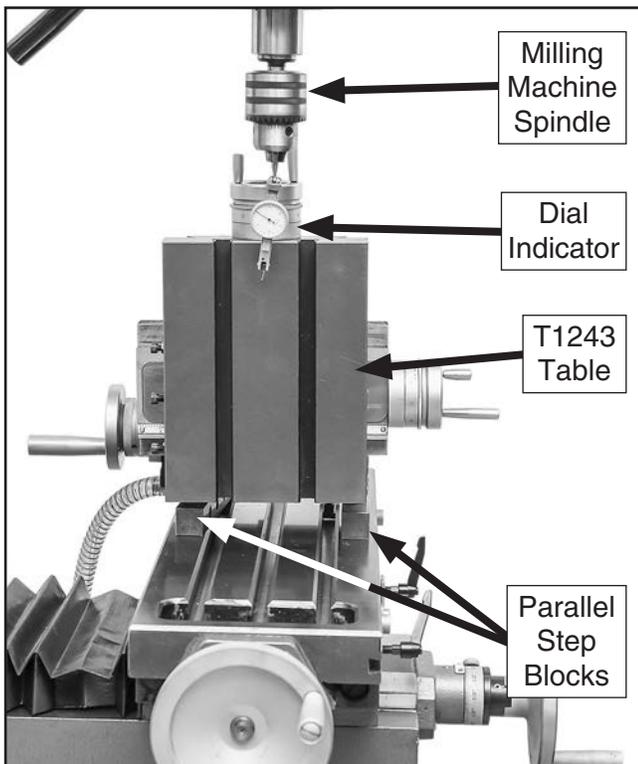


Figure 17. Using a dial indicator to align T1243 table with milling machine X-axis.

4. Move mill table in and out to indicate across full width of T1243 table.
5. If dial indicator reads evenly across T1243 table face, securely clamp it to milling machine table.
6. If dial indicator *does not* read evenly, loosen hold-down clamps and lightly tap T1243 to adjust position. Repeat **Step 4** until indicator reads evenly across full table width.

Angular Indexing

Angular indexing is the process used to create evenly spaced holes in a round workpiece. Always ensure your rotary table is properly aligned on the X-axis of the mill before beginning angular indexing.

Basic Example:

You are making a flange and need to place six holes 60° apart for the bolt pattern in **Figure 18**.

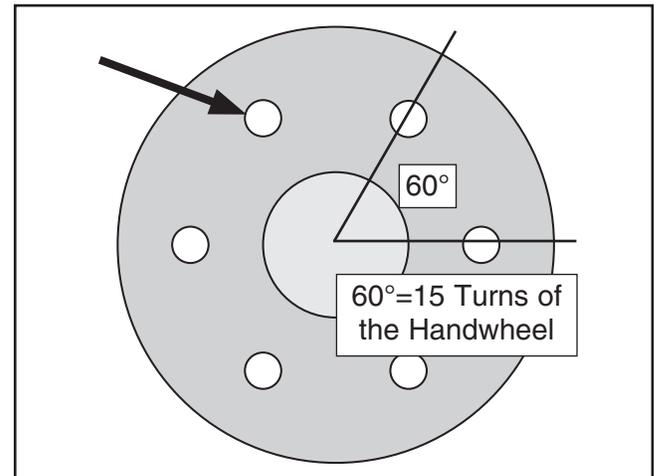


Figure 18. Example of flange layout.

$$\begin{aligned} \text{Handwheel Rotations} &= \frac{90}{N} \\ N &= \text{the desired division number (6).} \\ \frac{90}{6} &= 15 \text{ full handwheel turns} \\ 15 \text{ turns} &= 60^\circ \end{aligned}$$

1. Rotate handwheel before making first hole to take up any play in worm gear.
2. Make your first hole, then rotate handwheel 15 times.

Note: If you rotate handwheel too far, do not back up to the number. You must back up one revolution and dial back to the desired number, then lock table in place to locate the second hole. This procedure eliminates errors due to backlash in worm gear.



SECTION 4: ACCESSORIES

⚠ WARNING

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

NOTICE

Refer to our website or latest catalog for additional recommended accessories.

T24804—1" Universal Dial with Magnetic Base

Includes iGaging dial indicator, fine adjustment magnetic base, and a protective case. Dial indicator has a range of 0–1", with an accuracy of within 0.001". Fine adjustment magnetic base is a strong magnet with 85 lbs. of pull power and a V-shaped bottom so the base can be mounted at any angle.



Figure 19. T24804 Universal Dial with Magnetic Base.

G9640— 90° Wide-Base Square 3" x 5"

G9641— 90° Wide-Base Square 4" x 6"

G9642— 90° Wide-Base Square 5" x 8"

Grade 0, heavy-duty stainless steel 90° precision squares feature wide bases for stability. Perfect for all setup and inspection work.



Figure 20. 90° Precision wide-base square.

H7978—Fractional Digital Caliper

Large LCD readout converts to decimal inch, fractional inch and millimeters with the push of a button. Measure internal, external dimensions, depth, steps and differential measurements. Features thumb roll and stainless steel construction. Range: 0-6", 0-150mm. Resolution: 0.0005", 0.01mm, 1/128".

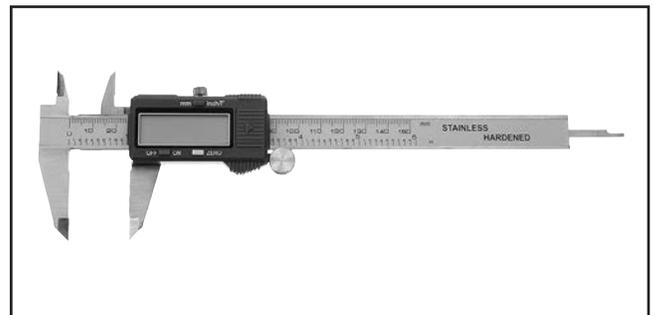


Figure 21. H7978 6" Digital Caliper.

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G1075—58-Pc. Clamping Kit 1/2" T-Nut

G1076—58-Pc. Clamping Kit 5/8" T-Nut

This clamping kit includes 24 studs, 6 step-block pairs, 6 T-nuts, 6 flange nuts, 4 coupling nuts, and 6 end hold-downs. The rack is slotted so it can be mounted close to the machine for easy access.

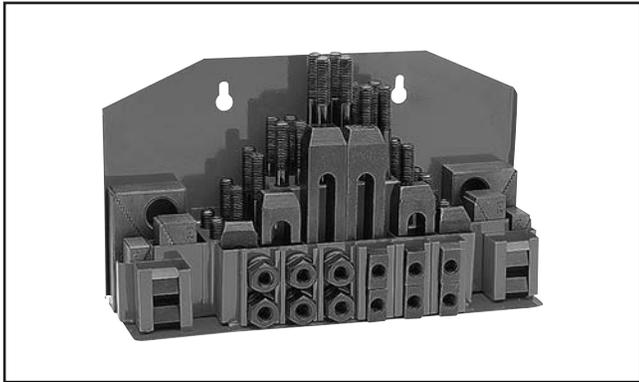


Figure 22. G1076 58-Pc. Clamping Kit.

H2939—4-Pc. Edge Finder Set

This is a must have set for any shop. 4 different styles to cover any setup problem! Set includes 1 each: 3/8" diameter with point, 3/8" dia. combination with a point and .200" shoulder, 1/2" dia. with a point, and 1/2" dia. with .200" shoulder.

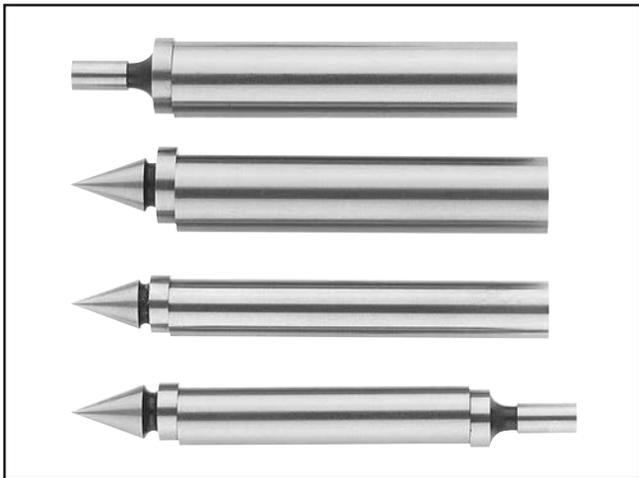


Figure 23. H2939 4-Pc. Edge Finder Set.

G9629—Universal Indicator Holder

Mount your test indicator right on your mill for guaranteed accurate readings. C-frame holder mounts with a single screw directly on the quill and does not interfere with the cutting tool. Clamping diameter is 1 7/8". The length from the clamping bracket to the indicator is 4 1/2". Suitable for all popular indicators with a 5/32" shank.



Figure 24. G9629 Universal Indicator Holder.

G9610—Test Indicator

0.030" Range/0.001" Resolution

G9611—Test Indicator

0.008" Range/0.0001" Resolution

G9612—Test Indicator

0.030" Range/0.0005" Resolution

These test indicators have an easy to read dial and a pivoting stylus that moves at right angles to the dial face.



Figure 25. Selection of test indicators.

order online at www.grizzly.com or call 1-800-523-4777



T27661—Premium Milling Vise 3"

Premium quality swiveling milling vise features perfectly aligned, precision ground jaws, robust clamping screw, and easy-to-read 0-360 degree scale. Maximum capacity: 3 $\frac{1}{8}$ ".

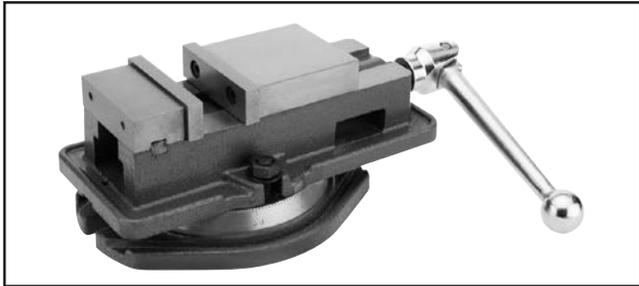


Figure 26. T27661 Premium Milling Vise 3".

G5679—Steel Parallel Block Set 1/2"

These ground and hardened sets feature four pairs of 6" long parallels that are accurate to within .0003" in parallelism and .0002" in height. Parallels are 1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ ", and 1 $\frac{3}{4}$ " high.

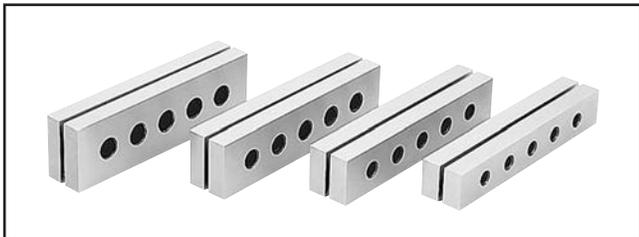


Figure 27. G5679 Steel Parallel Block Set 1/2".

H2713—Surface Gauges 9" & 12"

This surface gauge is ideal for set-up, layout and quickly comparing parts. Supplied with precision ground V-notched bases, spring-loaded fine adjustment knob, 1 long and 1 short spindle and adjustable base pins.



Figure 28. H2713 Surface Gauges 9" & 12".

G9600—Dual Outside Micrometer 2–3"

Dual reading Electronic Digital Outside Micrometer accurately measures outside dimensions between 2.00000 and 3.00000" (or 50.00000 and 75.00000mm) with graduations of 0.00005" (or 0.01270mm).



Figure 29. G9600 Dual Outside Micrometer 2–3".

T27348—Micrometer Set 0–3"

These Micrometer Sets feature vernier scales that read to 0.0001", ratchet stop adjustment, and lock levers. Sets include micrometers, standards, adjusting wrench, and protective case. Range is 0-3".

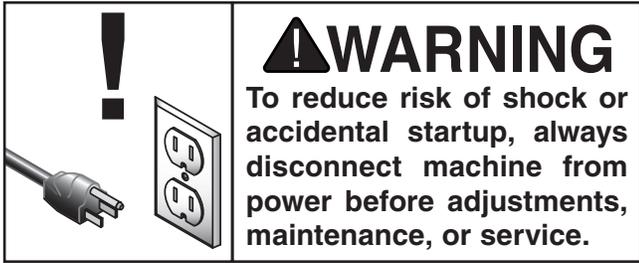


Figure 30. T27348 Micrometer Set 0–3".

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SECTION 5: MAINTENANCE



Schedule

For optimum performance from your cross-slide rotary table, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily/Before Use:

- Clean and lubricate the ball oilers.
- Dress the machined surfaces.
- Check/resolve any unsafe condition.

Monthly:

- Clean and lubricate X- and Y-axis leadscrews.

Cleaning & Protecting

It is essential that the rotary table be cleaned after every use, and the surfaces oiled with a light machine oil to prevent corrosion.

DO NOT use compressed air to clean your rotary table. Chips or debris may become lodged between the moving parts, reducing the life and accuracy of the device. Instead, use a stiff-bristled brush to remove the chips and swarf, then wipe down the surfaces with a clean shop rag.

Lubrication

Ball Oilers

Oil Type Grizzly T26685 or ISO 32 Equivalent
Oil Amount.....1 or 2 Squirts
Lubrication Frequency..... Daily/Before Use

There are two ball oilers that should be oiled on a daily basis, or before beginning operation. Refer to **Figure 31** for their locations.

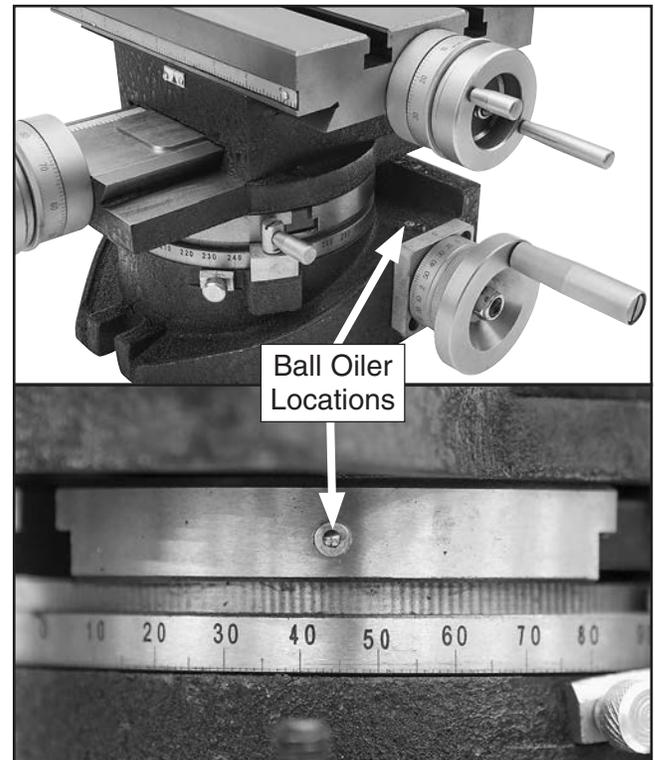


Figure 31. Location of ball oilers.

Lubricate the ball oilers with a pump-type can that has a plastic or rubberized cone tip. We do not recommend using metal needle or lance tips, as they can push the ball too far into the oiler, break the spring seat, and lodge the ball in the oil galley.

Clean the ball oiler before lubricating. Push the tip of the oil can nozzle against the ball oiler to create a hydraulic seal, then pump the oil can once or twice. If sludge and contaminants come out, pump the oil can until the oil runs clear. When finished, wipe off excess oil.



Leadscrews

Oil Type Grizzly T26685 or ISO 32 Equivalent
 Oil Amount..... Thin Layer
 Lubrication Frequency.....Monthly

Lubricate the X- and Y-axis leadscrews monthly, or more often under heavy use.

Items Needed	Qty
Mineral Spirits.....	As Needed
Stiff-Bristled Brush	1
Shop Rags.....	As Needed

To lubricate X-axis leadscrew:

1. Turn rotary table handwheel until X-axis handwheel is parallel with front mounting slot, as shown in **Figure 32**, then use X-axis handwheel to move table all the way forward over front mounting slot.

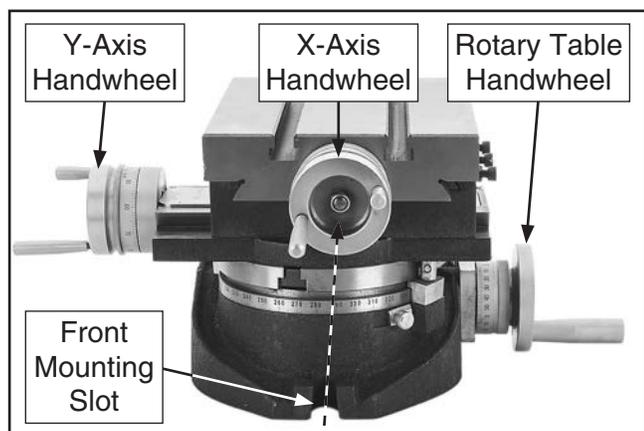


Figure 32. Aligning table to lubricate X-axis leadscrew.

Note: Because the T1243 table can rotate 360°, whichever handwheel aligns with the front mounting slot controls X-axis table travel. To access the X-axis leadscrew for lubrication, align the handwheels as shown in **Figure 32**.

2. Tip cross-rotary table up to expose leadscrew (see **Figure 33**).

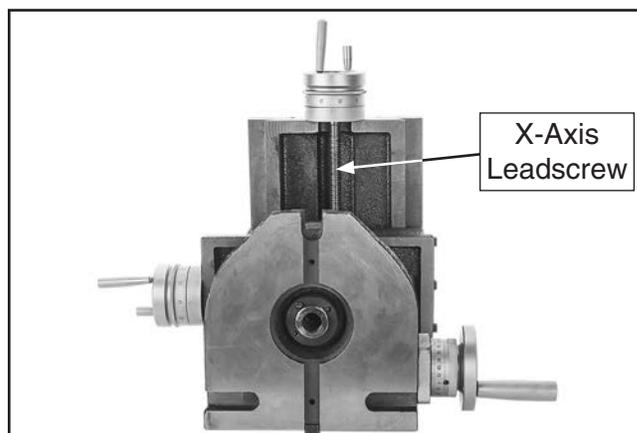


Figure 33. X-axis leadscrew exposed for cleaning and lubrication.

3. With stiff brush and mineral spirits, clean debris from leadscrew. Wipe clean with shop rag and allow to dry.
4. Coat leadscrew with thin layer of ISO 32 or equivalent oil.
5. Tip cross-rotary table back onto base, then use X-axis handwheel to move table along full length of travel to spread lubricant evenly along leadscrew.

To lubricate Y-axis leadscrew:

1. Turn Y-axis handwheel to expose Y-axis leadscrew cover (see **Figure 34**).

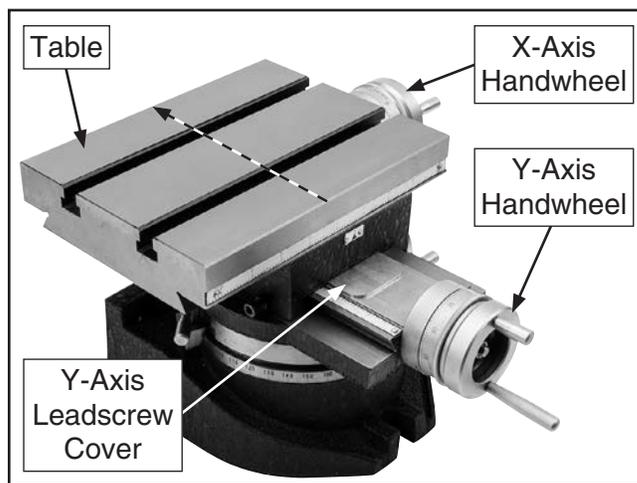


Figure 34. Location of Y-axis leadscrew cover.

Continued on next page →



2. Push cover under cross slide to expose Y-axis leadscrew (see **Figure 35**).

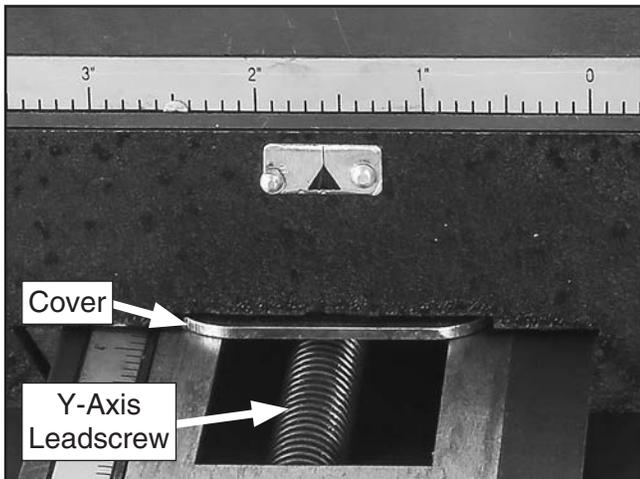


Figure 35. Y-axis leadscrew exposed for cleaning and lubrication.

3. With stiff brush and mineral spirits, clean debris from leadscrew. Wipe clean with shop rag and allow to dry.
4. Coat leadscrew with thin layer of ISO 32 or equivalent oil.
5. When finished, use Y-axis handwheel to move table along full length of travel to spread lubricant evenly along leadscrew.

Note: Y-axis leadscrew cover will close automatically when cross slide moves over it.

Adjusting Gibs

The function of the gibs is to remove play in the table (X-axis) and cross slide (Y-axis) without causing the slides to bind.

Each gib has (3) cap screws that can be adjusted (see **Figure 36**). The outer cap screws on each gib have (1) hex lock nut. When adjusting, make your adjustments equally and in small increments, and test the feel of the table movement while doing so until it feels right.

Tools Needed	Qty
Hex Wrench 5mm.....	1
Wrench Open-End 10mm.....	1

To adjust gibs:

1. Loosen lock nuts under outer gib screws on X-axis or Y-axis gib (see **Figure 36**).

Note: For best performance, adjust only one gib at a time.

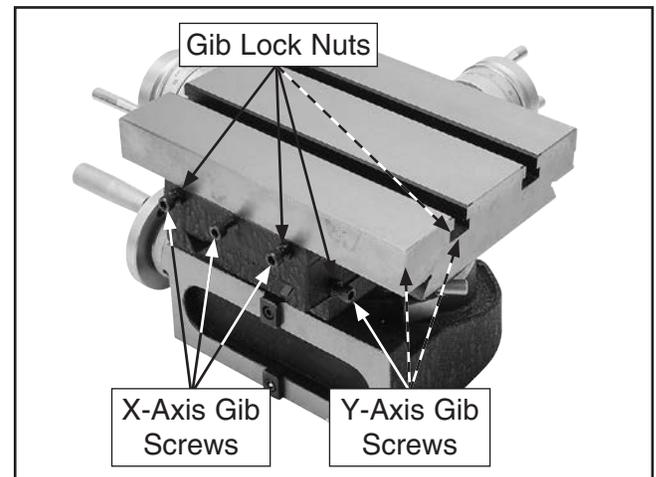


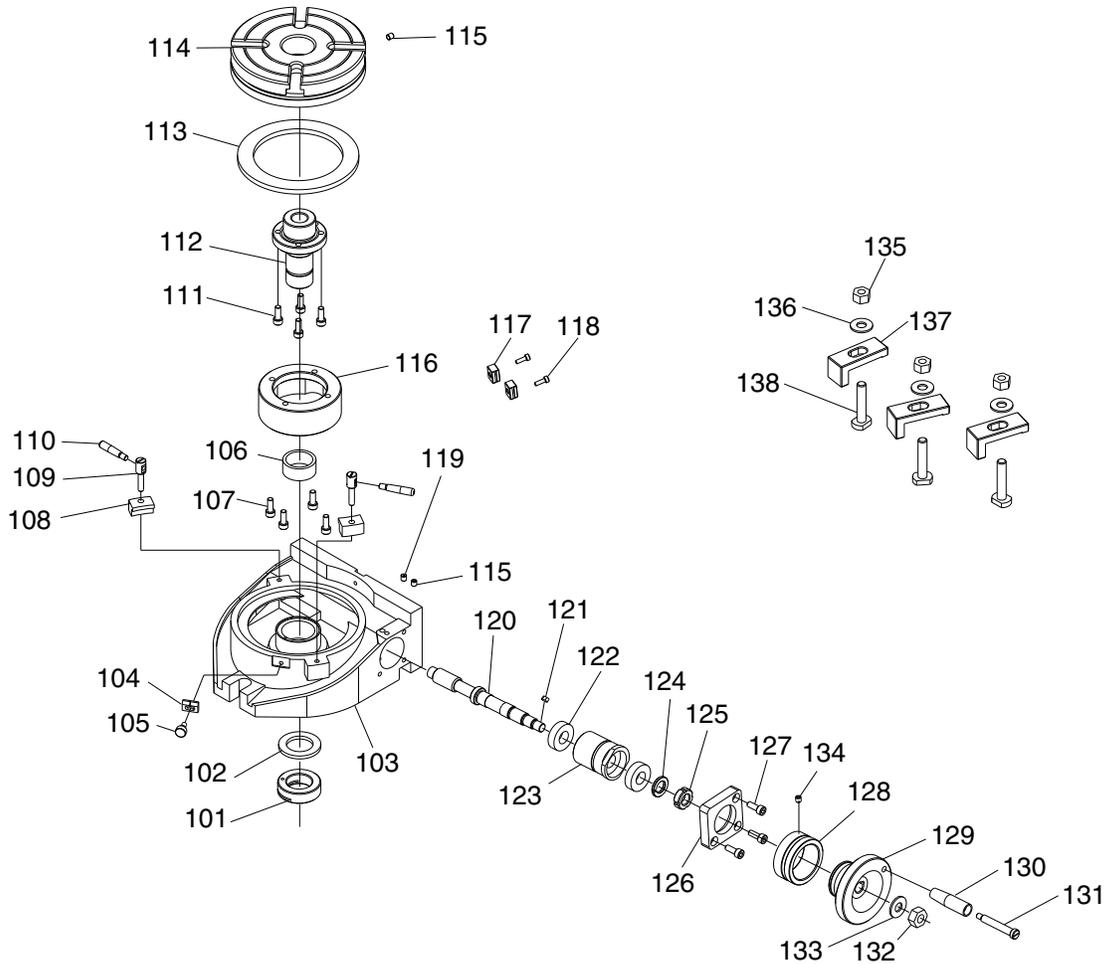
Figure 36. Gib screws and lock nuts.

2. Depending on current table movement, slightly loosen or tighten each gib screw in equal amounts, then move table with handwheels and test feel. When properly adjusted, gibs should offer slight resistance without binding.
3. Hold gib screw position with hex wrench, then tighten lock nut. Repeat on all gib screws.



SECTION 6: PARTS

T1243 Parts

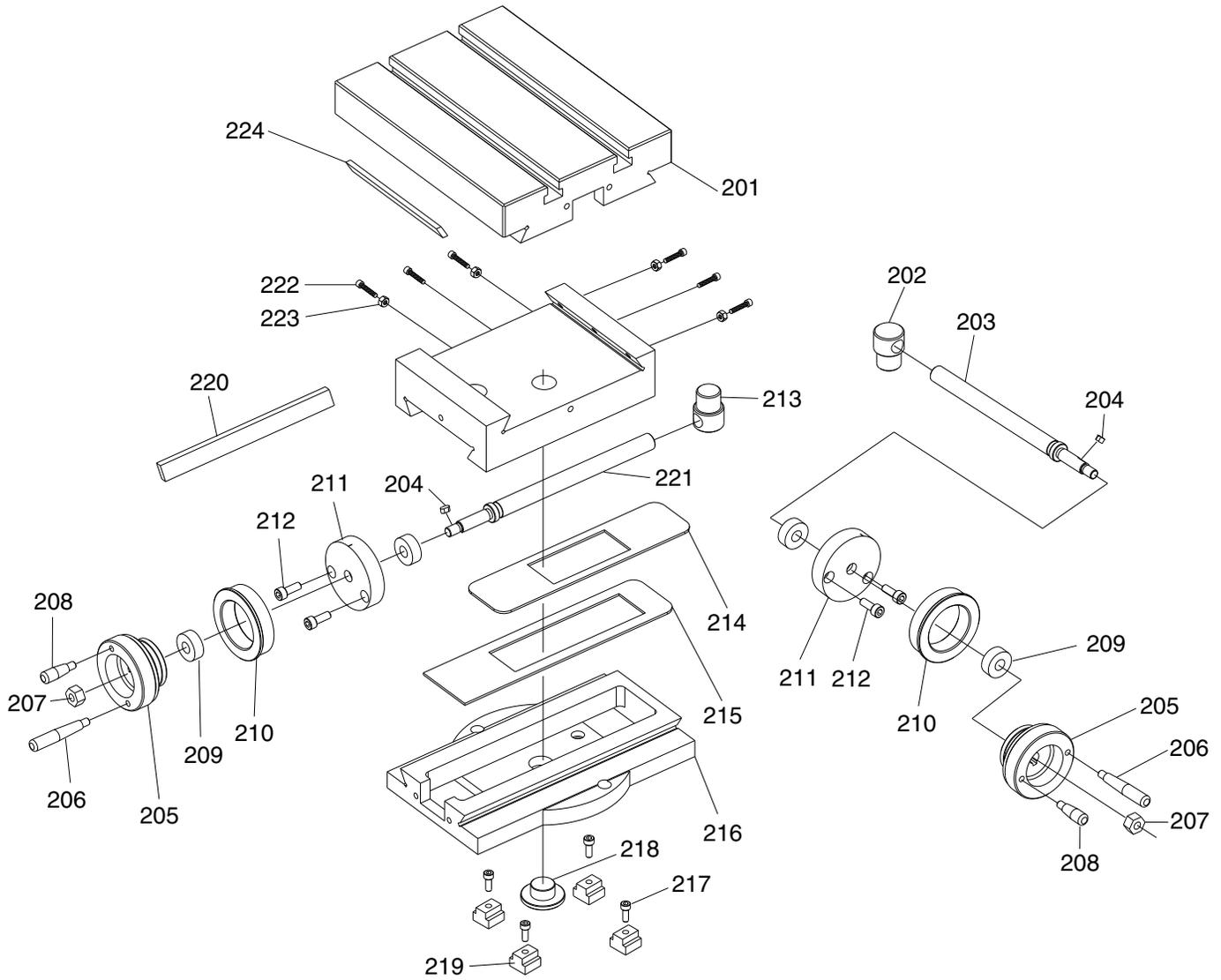


REF	PART #	DESCRIPTION
101	PT1243101	SPANNER NUT M30-3.5
102	PT1243102	FLAT NEEDLE BEARING AS3047
103	PT1243103	BASE
104	PT1243104	INDICATOR PLATE
105	PT1243105	KNURLED THUMB SCREW M5-.8 X 8, D12
106	PT1243106	NEEDLE BEARING KT3237
107	PT1243107	HEX BOLT M5-.8 X 20
108	PT1243108	LOCK BLOCK
109	PT1243109	LOCK SHAFT
110	PT1243110	FIXED HANDLE 10 X 33, M6-1 X 8
111	PT1243111	HEX BOLT M6-1 X 16
112	PT1243112	CENTER SHAFT
113	PT1243113	FLAT NEEDLE BEARING AS100135
114	PT1243114	TABLE
115	PT1243115	BALL OILER 6MM PRESS-IN
116	PT1243116	WORM WHEEL
117	PT1243117	LOCATING KEY 14 X 20 X 9
118	PT1243118	CAP SCREW M5-.8 X 16
119	PT1243119	SET SCREW M6-1 X 8

REF	PART #	DESCRIPTION
120	PT1243120	WORM SHAFT
121	PT1243121	KEY 4 X 4 X 8
122	PT1243122	THRUST BEARING 7002
123	PT1243123	COVER
124	PT1243124	LOCK RING
125	PT1243125	SPANNER NUT M8-1.25
126	PT1243126	SQUARE PLATE
127	PT1243127	CAP SCREW M6-1 X 14
128	PT1243128	DIAL RING
129	PT1243129	HANDWHEEL TYPE-10 80D X 10B-K X M8-1.25
130	PT1243130	HOLLOW HANDLE, 19 X 72, 11D
131	PT1243131	SHOULDER SCREW M8-1.25 X 10, 10 X 62
132	PT1243132	LOCK NUT M10-1.5
133	PT1243133	FLAT WASHER 10MM
134	PT1243134	SET SCREW M6-1 X 6
135	PT1243135	HEX NUT M10-1.5
136	PT1243136	FLAT WASHER 10MM
137	PT1243137	HOLD DOWN CLAMP
138	PT1243138	T-BOLT M10-1.5 X 60



T1243 Parts



REF	PART #	DESCRIPTION
201	PT1243201	CROSS SLIDE TABLE
202	PT1243202	LEADSCREW NUT (X-AXIS)
203	PT1243203	LEADSCREW (X-AXIS)
204	PT1243204	KEY 4 X 4 X 8
205	PT1243205	HANDWHEEL TYPE-10 63D X 8B-K X M6-1
206	PT1243206	FIXED HANDLE 10 X 58, M6-1 X 8
207	PT1243207	LOCK NUT M8-1.25
208	PT1243208	FIXED HANDLE 10 X 32, M6-1 X 8
209	PT1243209	THRUST BEARING 51100
210	PT1243210	DIAL RING
211	PT1243211	BRACKET
212	PT1243212	HEX BOLT M6-1 X 16

REF	PART #	DESCRIPTION
213	PT1243213	LEADSCREW NUT (Y-AXIS)
214	PT1243214	DUST GUARD (TOP)
215	PT1243215	DUST GUARD (BOTTOM)
216	PT1243216	TABLE BASE
217	PT1243217	CAP SCREW M6-1 X 18
218	PT1243218	CENTERING PIN
219	PT1243219	T-BOLT NUT M6-1
220	PT1243220	GIB (Y-AXIS)
221	PT1243221	LEADSCREW (Y-AXIS)
222	PT1243222	HEX BOLT M6-1 X 25
223	PT1243223	HEX NUT M6-1
224	PT1243224	GIB (X-AXIS)

We do our best to stock replacement parts when possible, but we cannot guarantee that all parts shown are available for purchase. Call **(800) 523-4777** or visit www.grizzly.com/parts to check for availability.





WARRANTY CARD

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The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. **Of course, all information is strictly confidential.**

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<input type="checkbox"/> Advertisement	<input type="checkbox"/> Friend	<input type="checkbox"/> Catalog
<input type="checkbox"/> Card Deck	<input type="checkbox"/> Website	<input type="checkbox"/> Other:

2. Which of the following magazines do you subscribe to?

<input type="checkbox"/> Cabinetmaker & FDM	<input type="checkbox"/> Popular Science	<input type="checkbox"/> Wooden Boat
<input type="checkbox"/> Family Handyman	<input type="checkbox"/> Popular Woodworking	<input type="checkbox"/> Woodshop News
<input type="checkbox"/> Hand Loader	<input type="checkbox"/> Precision Shooter	<input type="checkbox"/> Woodsmith
<input type="checkbox"/> Handy	<input type="checkbox"/> Projects in Metal	<input type="checkbox"/> Woodwork
<input type="checkbox"/> Home Shop Machinist	<input type="checkbox"/> RC Modeler	<input type="checkbox"/> Woodworker West
<input type="checkbox"/> Journal of Light Cont.	<input type="checkbox"/> Rifle	<input type="checkbox"/> Woodworker's Journal
<input type="checkbox"/> Live Steam	<input type="checkbox"/> Shop Notes	<input type="checkbox"/> Other:
<input type="checkbox"/> Model Airplane News	<input type="checkbox"/> Shotgun News	
<input type="checkbox"/> Old House Journal	<input type="checkbox"/> Today's Homeowner	
<input type="checkbox"/> Popular Mechanics	<input type="checkbox"/> Wood	

3. What is your annual household income?

<input type="checkbox"/> \$20,000-\$29,000	<input type="checkbox"/> \$30,000-\$39,000	<input type="checkbox"/> \$40,000-\$49,000
<input type="checkbox"/> \$50,000-\$59,000	<input type="checkbox"/> \$60,000-\$69,000	<input type="checkbox"/> \$70,000+

4. What is your age group?

<input type="checkbox"/> 20-29	<input type="checkbox"/> 30-39	<input type="checkbox"/> 40-49
<input type="checkbox"/> 50-59	<input type="checkbox"/> 60-69	<input type="checkbox"/> 70+

5. How long have you been a woodworker/metalworker?

<input type="checkbox"/> 0-2 Years	<input type="checkbox"/> 2-8 Years	<input type="checkbox"/> 8-20 Years	<input type="checkbox"/> 20+ Years
------------------------------------	------------------------------------	-------------------------------------	------------------------------------

6. How many of your machines or tools are Grizzly?

<input type="checkbox"/> 0-2	<input type="checkbox"/> 3-5	<input type="checkbox"/> 6-9	<input type="checkbox"/> 10+
------------------------------	------------------------------	------------------------------	------------------------------

7. Do you think your machine represents a good value? Yes No
8. Would you recommend Grizzly Industrial to a friend? Yes No
9. Would you allow us to use your name as a reference for Grizzly customers in your area?
Note: We never use names more than 3 times. Yes No

10. Comments: _____

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Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

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