

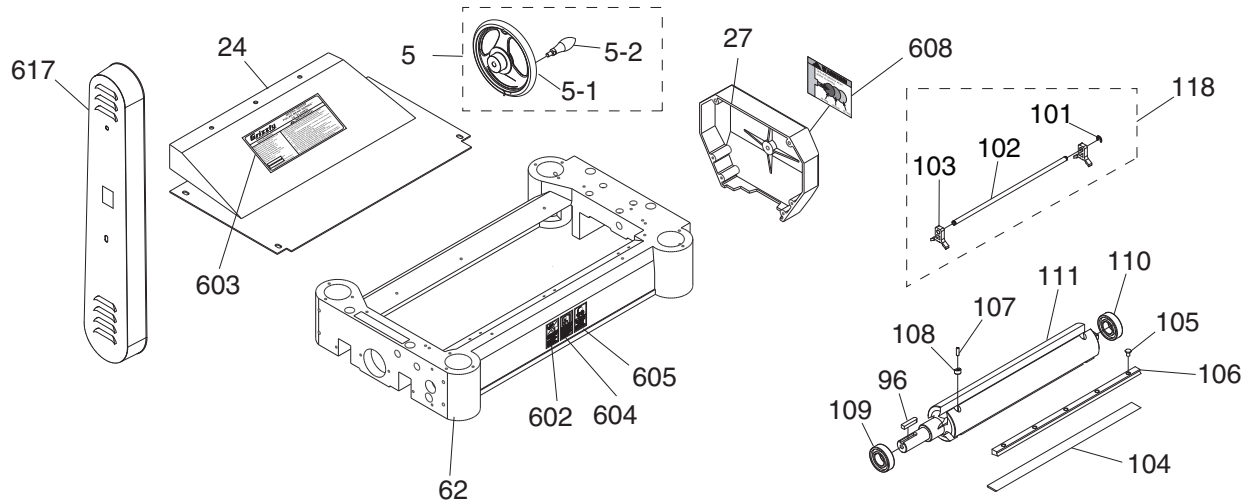


# MODEL G0453P POLAR BEAR SERIES 15" PLANER MANUAL INSERT

Congratulations on your purchase of a Model G0453P Planer! The Model G0453P is the same machine as the Model G0453Z but with a "cool" new look and a 3-knife cutterhead. All parts differences are shown below. Except for the differences noted in this insert, all other content in the Model G0453Z manual applies to this machine. Before operating your new machine, you **MUST** read and understand this insert, and the entire G0453Z manual to reduce the risk of serious personal injury when using this machine.

*If you have any questions about this manual insert or the differences between the Model G0453P and the Model G0453Z, contact our Technical Support at (570) 546-9663 or email [techsupport@grizzly.com](mailto:techsupport@grizzly.com).*

## Headstock Parts Breakdown



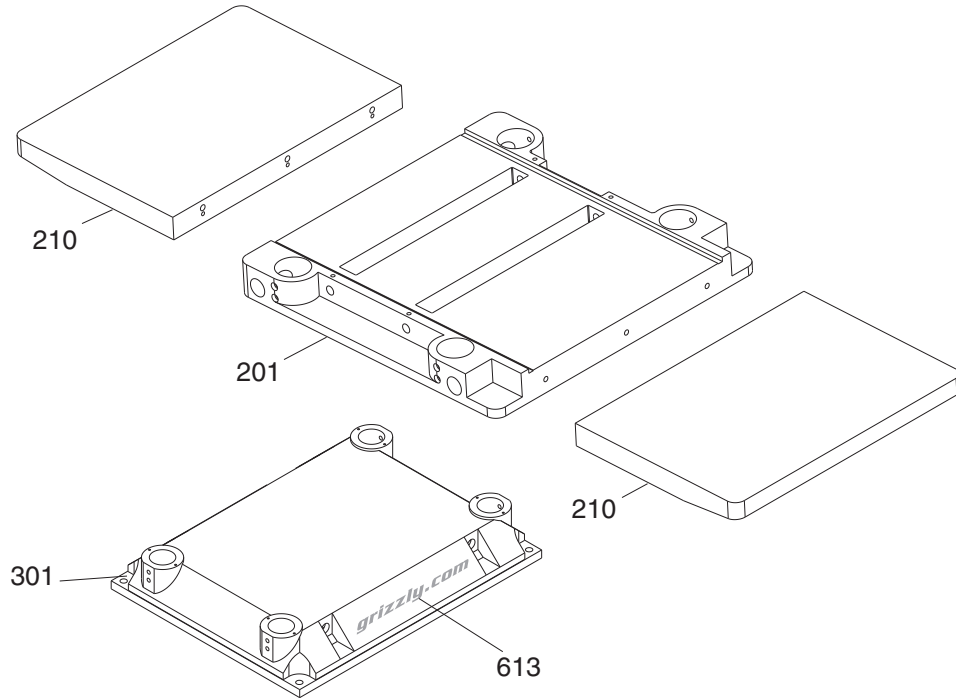
REF	PART #	DESCRIPTION
5	P0453P005	HANDWHEEL ASSEMBLY
5-1	P0453P005-1	HANDWHEEL
5-2	P0453P005-2	HANDLE M12-1.75
24	P0453P024	UPPER COVER
27	P0453P027	GEAR BOX COVER
62	P0453P062	HEAD CASTING
96	PK09M	KEY 8 X 8 X 35
101	PEC015M	E-CLIP 8MM
102	P0453102	KNIFE GAUGE SHAFT
103	P0453103	KNIFE GAUGE FOOT
104	P0453104	KNIFE (SET OF 3)
105	P0453105	GIB SCREW
106	P0453106	GIB

REF	PART #	DESCRIPTION
107	PSB24M	CAP SCREW M5-.8 X 16
108	P0453108	ADJUSTING NUT
109	P6205ZZ	BALL BEARING 6205ZZ
110	P6204ZZ	BALL BEARING 6204ZZ
111	P0453111	CUTTERHEAD
118	P0453118	KNIFE GAUGE ASSEMBLY
602	PLABEL-37	GLASSES/RESPIRATOR LABEL
603	P0453P603	MACHINE ID LABEL
604	PLABEL-12A	READ MANUAL LABEL
605	PLABEL-15	HEARING PROTECTION LABEL
608	P0453P608	GEARBOX SPEED LABEL
617	P0453P104	BELT COVER

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(FOR MODELS MANUFACTURED SINCE 5/10) #BL12910 PRINTED IN CHINA

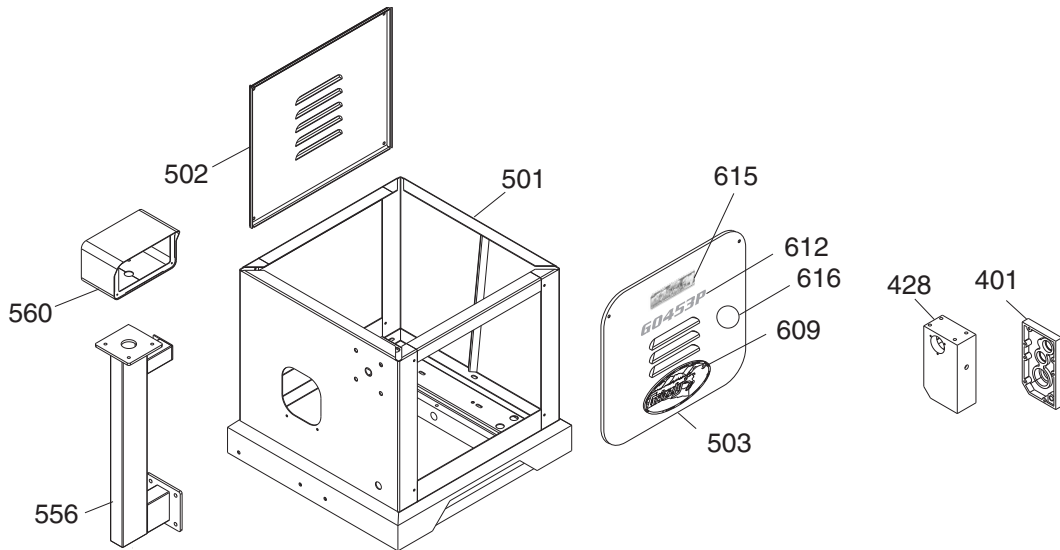
## Table and Base Parts Breakdown



REF	PART #	DESCRIPTION
201	P0453P201	TABLE/BED
210	P0453P210	EXTENSION WING

REF	PART #	DESCRIPTION
301	P0453P301	BASE
613	P0453P613	GRIZZLY.COM LABEL GREEN

## Stand and Gearbox Parts Breakdown



REF	PART #	DESCRIPTION
401	P0453P401	GEAR BOX COVER
428	P0453P428	GEAR BOX
501	P0453P501	ENCLOSED STAND
502	P0453P502	BACK COVER
503	P0453P503	FRONT COVER
556	P0453P556	SUPPORT ARM

REF	PART #	DESCRIPTION
560	P0453P560	CONTROL BOX
609	G8588	GRIZZLY LOGO PLATE
612	P0453P612	MODEL # LABEL
615	PLABEL-75	POLAR BEAR LOGO 2-1/2 X 9-1/2
616	PPAINT-24	POLAR BEAR WHITE TOUCH-UP PAINT





# MACHINE DATA SHEET

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

## MODEL G0453P POLAR BEAR SERIES 15" PLANER

### Product Dimensions:

Weight ..... 655 lbs.  
 Length/Width/Height ..... 42" x 32" x 45<sup>7</sup>/<sub>8</sub>"  
 Foot Print (Length/Width)..... 22<sup>1</sup>/<sub>2</sub>" x 22"

### Shipping Dimensions:

Type ..... Wood  
 Content..... Machine  
 Weight..... 675 lbs.  
 Length/Width/Height..... 31" x 30" x 47"

### Electrical:

Power Requirement ..... 220V, Single-Phase, 60 Hz  
 Switch..... Magnetic with Thermal Overload Protector  
 Switch Voltage ..... 220V  
 Cord Length ..... 5 ft.  
 Cord Gauge ..... 12 gauge  
 Minimum Circuit Size ..... 20 Amp  
 Plug Included ..... No  
 Recommended Plug/Outlet Type..... 6-20

### Motors:

#### Main

Type..... TEFC Capacitor Start Induction  
 Horsepower ..... 3 HP  
 Voltage ..... 220V  
 Phase ..... Single  
 Amps ..... 15A  
 Speed ..... 3450 RPM  
 Cycle..... 60 Hz  
 Number Of Speeds..... 1  
 Power Transfer..... Triple V-Belt Drive  
 Bearings ..... Sealed and Lubricated

### Main Specifications:

#### Operation Info

Maximum Cut Width ..... 15"  
 Min. Stock Length..... 8"  
 Min. Stock Thickness ..... <sup>3</sup>/<sub>16</sub>"  
 Maximum Stock Thickness..... 8"  
 No. Of Cuts Per Inch ..... 42, 63  
 No Of Cuts Per Minute..... 15,000  
 Cutterhead Speed ..... 5000 RPM  
 Planing Feed Rate..... 16, 30 FPM  
 Max. Cut Depth Planing Full Width ..... <sup>3</sup>/<sub>32</sub>"  
 Max. Cut Depth Planing 6 Inch Wide Board ..... <sup>1</sup>/<sub>8</sub>"



**Cutterhead Info**

Cutterhead Type.....	3 Knife
Cutterhead Dia .....	3"
No. Of Knives .....	3
Knife Type .....	HSS
Knife Size Length .....	15"
Knife Size Width .....	1"
Knife Size Thickness .....	1/8"
Knife Adjustment .....	Jack Screws

**Table Info**

Table Movement.....	8 in.
Table Bed Size Length.....	20"
Table Bed Size Width.....	15"
No. Of Bed Rollers .....	2
Floor to Table Height.....	27 – 35"
Roller Ext Table Size Length.....	42"
Roller Ext Table Size Width .....	15"
Roller Ext Table Size Thickness .....	1 3/4"

**Construction**

Table Construction .....	Precision-Ground Cast Iron
Body Construction .....	Cast Iron
Stand Construction.....	Formed Steel
Cutterhead Assembly Construction.....	Steel
Infeed Roller Construction.....	Solid Serrated Steel
Outfeed Roller Construction .....	Solid Serrated Steel
Paint .....	Powder Coated

**Other**

Table Locks .....	Two Positive
Measurement Scale .....	Inch and Metric
No. Of Dust Ports .....	1
Dust Port Size .....	4"
Mobile Base.....	Built-In

**Other Specifications:**

Country Of Origin .....	China
Warranty.....	1 Year
Serial Number Location .....	ID Label on Upper Cover
Customer Setup and Cleaning Time.....	1 1/2 Hours

**Features:**

- White Powder Coated Paint
- Inch and Metric Measurement Scale
- Two Adjustable Bed Rollers
- Chip Breaker and Pressure Bar
- Knife Setting Jig Included
- Board Return Rollers
- Built-In, Easy-to-Use Mobile Base
- Cast Iron Extension Wings
- Four Column Support with Table Locks
- Two Speed Automatic Board Feed

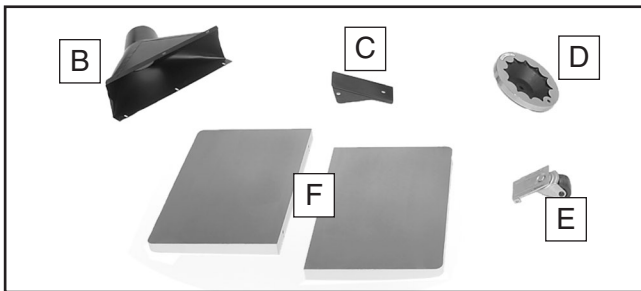


# Inventory

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

**Note:** *If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.*

Box Inventory: (Figure 1)	Qty
A. Planer (Not Shown).....	1
B. Dust Hood .....	1
C. Foot Pedal.....	1
D. Handwheel .....	1
E. Caster.....	1
F. Extension Wings.....	2



**Figure 1.** Model G0453P inventory.

## Hardware and Tools (not shown)

- Set Screws M8-1.25 x 20 (Wings) ..... 4
- Hex Bolts M8-1.25 x 30 (Wings) ..... 6
- Flat Washers 8mm (Wings)..... 6
- Lock Washers 8mm (Wings) ..... 6
- Handwheel Bushing ..... 1
- Handwheel Handle ..... 1
- Hex Nut M12-1.75 (Handwheel)..... 1
- Flat Washer 12mm (Handwheel) ..... 1
- Hex Bolts M6-1 x 10 (Dust Hood) ..... 3
- Flat Washers 6mm (Dust Hood)..... 6
- Hex Nuts M6-1 (Dust Hood)..... 3
- Cap Screws M8-1.25 x 20 (Dust Hood) ..... 3
- Hex Wrenches 2.5, 3, 4, 6mm ..... 1 Each
- Wrenches 10/12, 14/17, 17/19mm .... 1 Each
- Knife Gauge ..... 1

If any nonproprietary 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.

# Setting/Replacing Knives

## ! WARNING

Using dull or damaged knives increases the risk of kickback and poor quality cutting results. Only use sharp, undamaged knives to prevent serious personal injury and achieve high quality results.

## ! CAUTION

Planer knives are extremely sharp and can quickly cause a serious injury to your hands or fingers. Always wear heavy leather gloves when handling these knives to reduce the risk of cutting injuries.

Setting the height of the knives correctly is crucial to the proper operation of your planer and is very important in keeping the knives sharp. If one knife protrudes higher than the others, it will do the majority of the work, dull much faster, and produce poor cutting results.

The knife gauge that is included with the Model G0453P is designed to set the knives 0.059" higher than the cutterhead surface.

**Note:** *If you need to replace or sharpen a knife, you can remove the knife from the cutterhead during **Step 5** of the following procedure. Thoroughly clean out any debris from the knife slots before replacing the knives.*

*Replacement knives are available through Grizzly (refer to **Page 7** for options).*

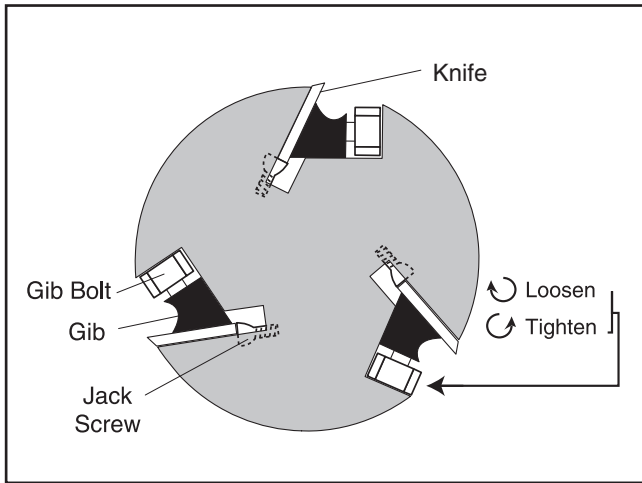
Tools Needed	Qty
Hex Wrench 2.5mm.....	1
Wrench 10mm .....	1
Knife Gauge .....	1

## To adjust the height of the knives:

1. DISCONNECT PLANER FROM POWER!
2. Remove the dust hood, the top cover, and V-belt cover.

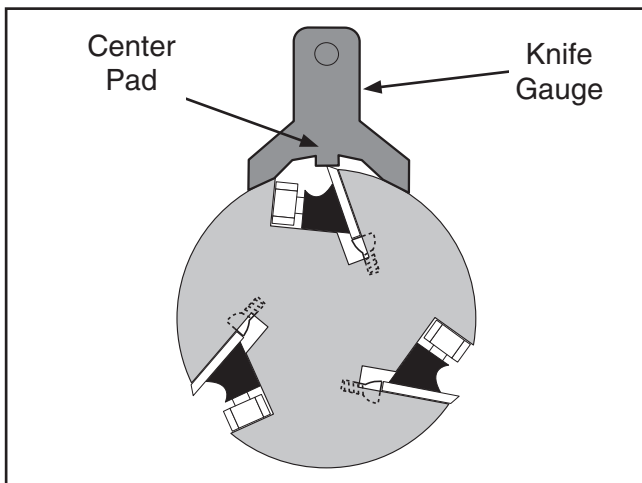


- Put on heavy leather gloves to protect your fingers and hands.
- Rotate the V-belt to give you good access to one of the knives shown in **Figure 2**.



**Figure 2.** Cutterhead components.

- If you have not already done so, loosen the cutterhead gib bolts (see **Figure 2**) until the knife is completely loose, then position the knife gauge over the knife so that the knife edge is directly under the center pad, as shown in **Figure 3**.



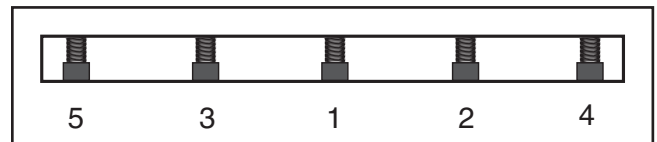
**Figure 3.** Knife gauge correctly positioned over the knife.

- Insert the hex wrench into the jack screws through the access holes in the cutterhead (see **Figure 4**). Rotate the jack screws to raise or lower the knife until it barely touches the center pad of the knife gauge with all legs of the gauge still firmly on the cutterhead, then snug the gib bolts enough to hold the knife in place.



**Figure 4.** Jack screw access hole in the cutterhead.

- Slightly tighten the gib bolts, starting at the middle and working your way to the ends by alternating left and right, as illustrated in **Figure 5**.



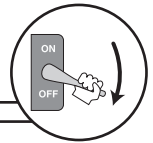
**Figure 5.** Gib bolt tightening sequence.

- Repeat **Step 7**.
- Repeat **Step 7**, but final tighten the gib bolts.
- Repeat **Steps 5–9** for the rest of the knives.
- Re-install the V-belt cover, top cover, and dust hood.





# Troubleshooting



## Machine Operation

Symptom	Possible Cause	Possible Solution
Consistent chipping pattern.	1. Nicked or chipped knife.	1. Sharpen/replace knife ( <b>Page 5</b> ).
Fuzzy grain.	1. Dull knives/inserts.	1. Sharpen/replace knives ( <b>Page 5</b> ).
Long lines or ridges that run the length of the workpiece.	1. Nicked or chipped knife.	1. Sharpen/replace knives ( <b>Page 5</b> ).
Uneven cutting marks, wavy surface, or chatter marks across the face of the workpiece.	1. Knife heights not correct.	1. Adjust knives to the proper height ( <b>Page 5</b> ).
Glossy surface.	1. Knives are dull.	1. Sharpen/replace knives ( <b>Page 5</b> ).

## Accessories

### G1738—Rotacator™ Precision Planer Tool

The Rotacator is a dial indicator on a magnetic base and is designed for quickly and accurately setting the critical tolerances needed when adjusting any planer, so that nasty surprises such as non-parallel and chattered cuts can be eliminated. Helps adjust infeed/outfeed rollers, pressure bars, chip breakers, and bed rollers. Also a great setup tool for other machines! Accurate to 0.001". Indicator rotates 360°

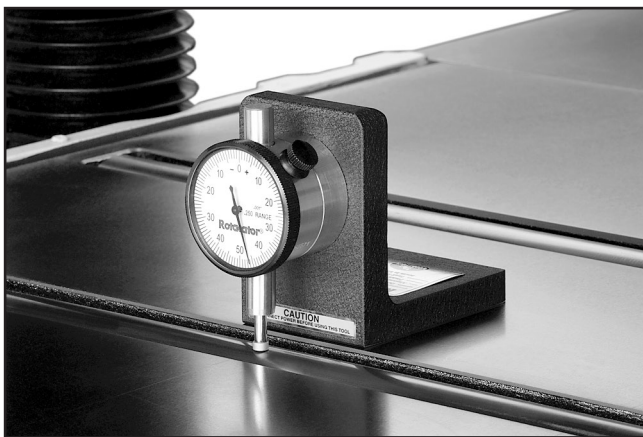


Figure 6. Rotacator™ Precision Planer Tool.

### G6701—HSS Replacement Knives for Model G0453, Set of 3, 15" x 1" x 1/8"

### G2790—Universal Knife Grinder

This dry-type Knife Grinder is ideal for sharpening planer and jointer knives. High quality cast iron construction, together with large knife holding capacity (will sharpen up to 20" planer/jointer knives) makes this grinder an excellent investment. Features a heavy-duty 1/2 HP 110V motor, knife holding angle adjustable from 20° to 70°, and adjustable-height 120 grit grinding wheel.

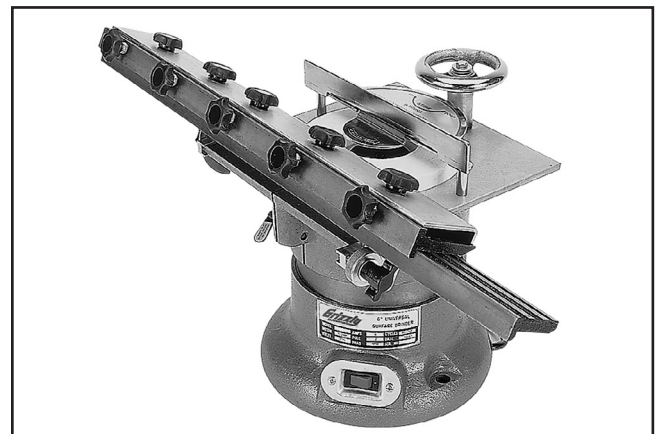


Figure 7. G2790 Universal Knife Grinder.



**H2301—Pair of Planer Pals® (standard)**

**H2302—Pair of Planer Pals® (carbide)**

Save time and cutting accuracy by setting your knife height perfect every time. Planer Pals feature precision magnets to hold blades to within  $\pm 0.001$ " every time.



**Figure 8.** Planer Pals in action!

**G8983—Tilting Roller Stand**

Adjusts from 26" to 44", 0°-45°. 150 lb. capacity.

**G8984—Single Roller Stand**

Adjusts from 26 5/8" to 45". 250 lb. capacity.

**G8985—5 Roller Stand**

Adjusts from 26" to 44 5/8". 250 lb. capacity.

These super heavy-duty roller stands feature convenient hand knobs for fast height adjustment.

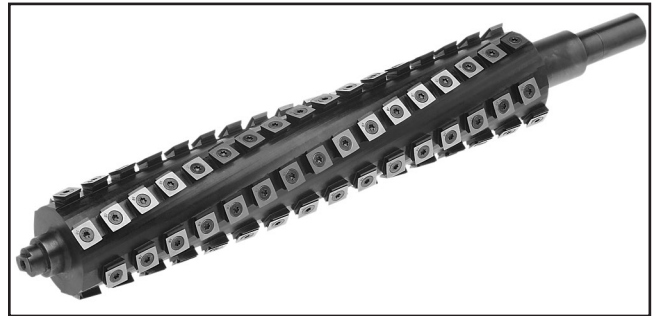


**Figure 9.** SHOP FOX® Roller Stands.

**H7768—15" Byrd® Shelix Cutterhead**

**H7769—20" Byrd® Shelix Cutterhead**

Made in the USA by Byrd, this indexable carbide insert cutterhead is the best money can buy—period! The inserts are not only placed in a spiral pattern, they are also positioned at an angle so the shearing action leaves a glassy smooth cut on the toughest and most figured woods. Comes with 5 extra replacement inserts. Great upgrade!



**Figure 10.** Byrd® Shelix Cutterhead.

**G8982—Roller Table**

Use this versatile roller table wherever you need extra workpiece support. Features all steel welded construction and measures 19" x 65" long. Comes with 9 ball bearing rollers and has four independently adjustable legs for any leveling requirement. Adjustable in height from 26 3/8" to 44 1/8".



**Figure 11.** SHOP FOX® Roller Table.

