WOODSTOCK

SHOP FOX®

INTERNATIONAL

MODEL W1708
12" DISC SANDER

OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 10/07)

Phone: (360) 734-3482 • Online Technical Support: tech-support@shopfox.biz

#5488EW

Printed in China

⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

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

The owner of this machine/equipment 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, blade/cutter 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.

Contents

USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!

INTRODUCTION

Woodstock Technical Support

This machine has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: **tech-support@shopfox.biz**. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition of this manual, you can download it from **http://www.shopfox.biz**.
If you have comments about this manual, please contact us at:

Woodstock International, Inc.
Attn: Technical Documentation Manager
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Bellingham, WA 98227
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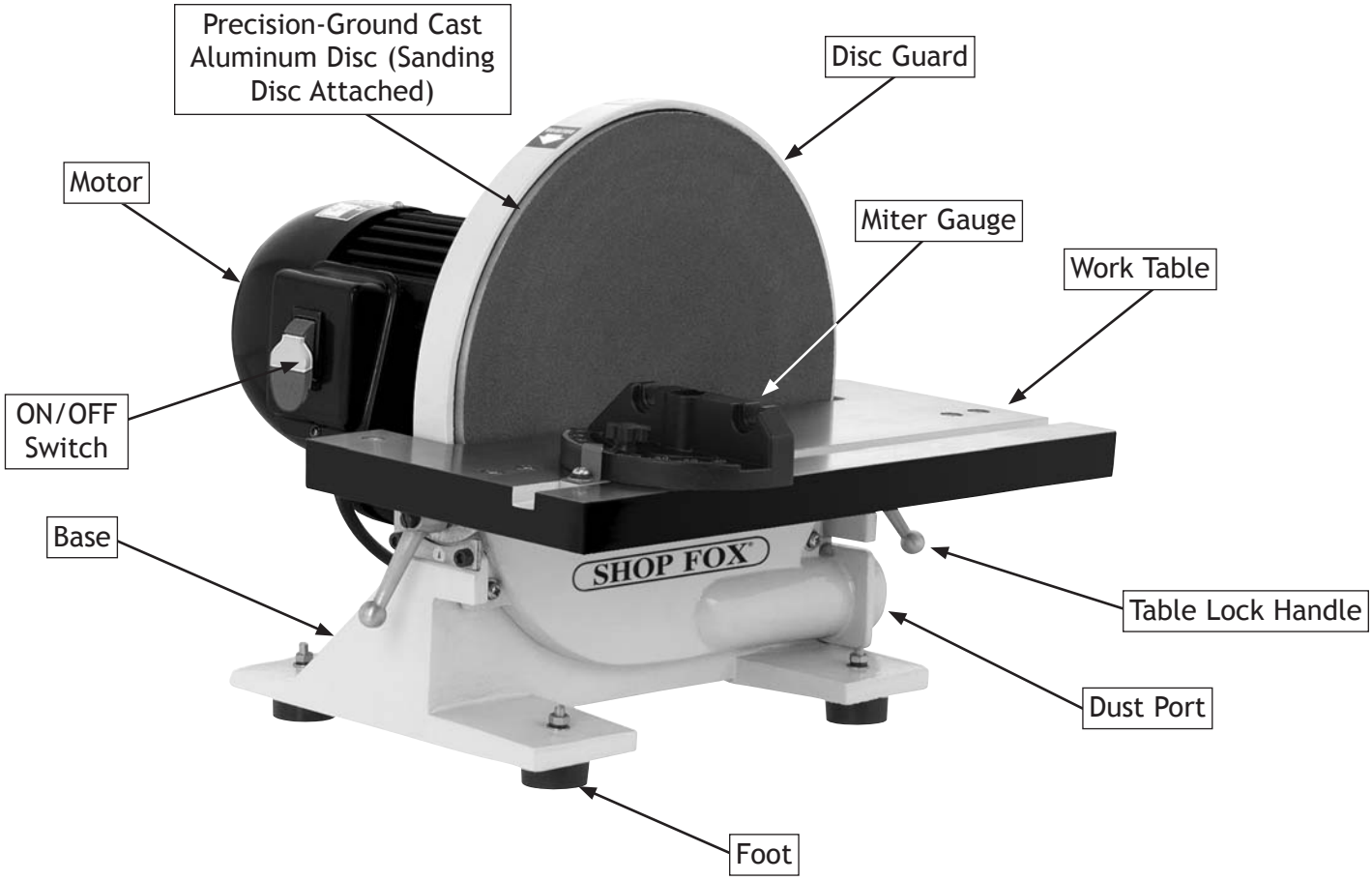
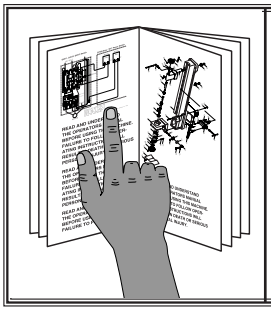
Specifications

Machine Product Weight	68 lbs.
Machine Shipping Weight	74 lbs.
Footprint	13" W x 10" D
Power Requirement	110V, Single Phase, 60 Hz
Switch	Paddle ON/OFF Switch, w/Safety Lock Key
Motor	1 HP, 110V, 60 Hz
Motor Speed	1725 RPM
Amps	10A
Power Transfer	Direct Drive
Sanding Disc	12"
Disc Speed	1725 RPM
Table Dimensions	$17\frac{1}{2}$" x $8\frac{1}{4}$"
Bearings	Sealed, Permanently Lubricated
Paint	Powder Coated
Dust Port	2"

Controls and Features





⚠WARNING

To reduce the risk of serious injury when using this machine, read and understand this entire manual before beginning any operations.

SAFETY

READ MANUAL BEFORE OPERATING MACHINE. FAILURE TO FOLLOW INSTRUCTIONS BELOW WILL RESULT IN PERSONAL INJURY.

⚠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.

NOTICE This symbol is used to alert the user to useful information about proper operation of the equipment, and/or a situation that may cause damage to the machinery.

Standard Safety Instructions

1. **READ THROUGH THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.

2. **ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.

3. **ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.

4. **ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing damage.

5. **WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.

6. **NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.

7. **ONLY ALLOW TRAINED AND PROPERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY.** Make sure operation instructions are safe and clearly understood.

8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.

9. **MAKE WORKSHOP CHILD PROOF.** Use padlocks, master switches, and remove start switch keys.

10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power ***OFF*** and allow all moving parts to come to a complete stop before leaving machine unattended.

11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.

12. **KEEP WORK AREA CLEAN AND WELL LIT**. Clutter and dark shadows may cause accidents.

13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.

14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY**. Make sure switch is in OFF position before reconnecting.

15. **MAINTAIN MACHINERY WITH CARE**. Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. **MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**

17. **REMOVE ADJUSTING KEYS AND WRENCHES**. Make a habit of checking for keys and adjusting wrenches before turning machinery ***ON***.

18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair or replace damaged parts.

19. **USE RECOMMENDED ACCESSORIES**. Refer to the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury.

20. **DO NOT FORCE MACHINERY**. Work at the speed for which the machine or accessory was designed.

21. **SECURE WORKPIECE**. Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.

22. **DO NOT OVERREACH**. Keep proper footing and balance at all times.

23. **MANY MACHINES WILL EJECT THE WORKPIECE TOWARD THE OPERATOR**. Know and avoid conditions that cause the workpiece to "kickback."

24. **ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY.**

25. **BE AWARE THAT CERTAIN DUST MAY BE HAZARDOUS** to the respiratory systems of people and animals, especially fine dust. Make sure you know the hazards associated with the type of dust you will be exposed to and always wear a respirator approved for that type of dust.

Additional Safety for Disc Sanders

⚠WARNING

READ and understand this entire manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. DO NOT risk your safety by not reading!

⚠CAUTION

USE this and other machinery with caution and respect. Always consider safety first, as it applies to your individual working conditions. No list of safety guidelines can be complete—every shop environment is different. Failure to follow guidelines could result in serious personal injury, damage to equipment or poor work results.

1. **RESPIRATOR AND SAFETY GLASSES.** Always wear a respirator and safety glasses while operating the machine. Dust and chips are created when sanding. Some debris will be ejected, becoming hazards to the eyes and lungs.

2. **DUST COLLECTION SYSTEM**. Never operate the sander without an adequate dust collection system in place and running.

3. **CLOTHING.** DO NOT wear loose clothing while operating this machine. Roll up or button sleeves at the cuff.

4. **HAND PROTECTION**. DO NOT place hands near, or in contact with, sanding disc during operation. DO NOT allow fingers to get pinched between the workpiece and the table. This may pull the operator's hand into the machine and cause serious injury!

5. **MINIMUM STOCK DIMENSIONS**. Do not sand any stock thinner than 1/16", narrower than 1/8", or shorter than 9".

6. **INSPECTING WORKPIECES**. Always inspect workpiece for nails, staples, knots, and other imperfections that could be dislodged and thrown from the machine during sanding operations.

7. **FEEDING STOCK.** Firmly grasp the workpiece in both hands and ease it into the machine using light pressure. DO NOT jam the workpiece into the machine during operation. Feed the workpiece against the direction of rotation. DO NOT sand tapered or pointed stock with the point facing the feed direction. Never sand more than one piece of stock at a time.

8. **UNATTENDED OPERATION**. Never leave the machine running unattended.

9. **REPLACING SANDPAPER**. Replace sanding paper when it becomes worn. DO NOT operate the sander with a damaged or badly worn sandpaper.

10. **MAINTENANCE AND ADJUSTMENTS**. Perform machine inspections and maintenance service promptly when called for. Disconnect power before performing maintenance or adjustments on the sander.

11. **EXPERIENCING DIFFICULTIES**. Any problem that is concerned with any moving parts or accessories, must be investigated and corrected with the power disconnected, and after all moving parts have come to a complete stop.

ELECTRICAL

⚠WARNING

The machine must be properly set up before it is safe to operate. DO NOT connect this machine to the power source until instructed to do so in the "Test Run" portion of this manual.

110V Operation

The Model W1708 is wired for 110V operation. The power supply circuit used for this machine MUST be grounded and rated for the amperage given below. Never replace a circuit breaker with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes.

This machine must be grounded! The electrical cord supplied with this machine comes with a grounding pin. If your outlet does not accommodate a ground pin, have it replaced by a qualified electrician.

If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, you may create a fire or circuit overload hazard—consult a qualified electrician to reduce this risk.

Extension Cords

We do not recommend using an extension cord; however, if you have no alternative, use the following guidelines:

- Use a cord rated for Standard Service (S).
- Do not use an extension cord longer than 50 feet.
- Ensure that the cord has a ground wire and pin.
- Use the gauge size listed below as a minimum.

Power Connection Device

This machine comes with a plug, similar to **Figure 1**, to connect the machine to power.

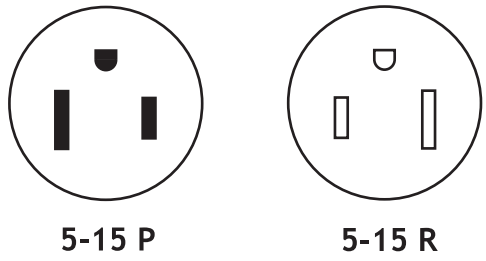


Figure 1. 5-15 plug and receptacle.

⚠WARNING

DO NOT work on your electrical system if you are unsure about electrical codes and wiring! Seek assistance from a qualified electrician. Ignoring this warning can cause electrocution, fire, or machine damage.

Electrical Specifications

Operating Voltage	Amp Draw	Min. Circuit Size	Plug/Recommended Plug	Extension Cord
110V Operation	10 Amps	15A	NEMA 5-15	14 Gauge

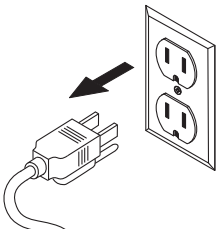
SETUP

Needed for Setup

The following are needed to complete the setup process, but are not included with your machine.

Description	Qty
• Safety Glasses	1
• Cleaner/Degreaser	As Needed
• Disposable Shop Rags	As Needed
• Additional People	1
• Dust Hose 2"	1
• Dust Hose Clamp 2"	1
• Adapter 4" x 2" (Optional)	1
• Dust Hose 4" (Optional)	1
• Dust Hose Clamp 4" (Optional)	1
• Mounting Hardware	As Needed

WARNING



Keep machine disconnected from power until instructed otherwise.

Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

Inventory

The following is a description of the main components shipped with the Model W1708. 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 safer shipping.*

Box Inventory (Figure 2)	Qty
A. Disc Sander	1
B. Sanding Disc	1
C. Miter Gauge	1

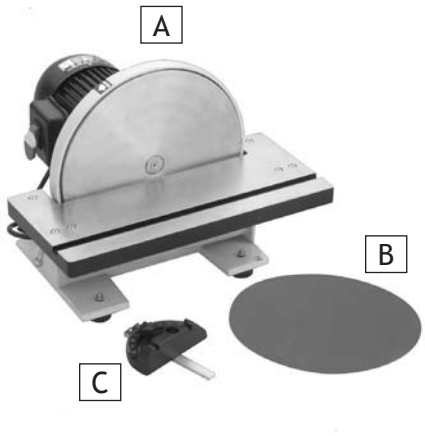


Figure 2. W1708 box inventory.

Cleanup

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage.

This rust preventative has been your machine's close ally and guardian since it left the factory. If your machine arrived to you free of rust, then be thankful that the rust preventative protected it during its journey...and try to stay thankful as you clean it off, because it can be challenging to remove if you are unprepared and impatient.

Plan on spending some time cleaning your machine. The time you spend doing this will reward you with smooth sliding parts and a better appreciation for the proper care of your machine's unpainted surfaces.

Although there are many ways to successfully remove the rust preventative, these instructions walk you through what works well for us.

Before cleaning, gather the following:
- Disposable Rags
- Cleaner/degreaser
- Safety glasses & disposable gloves

Note: *In a pinch, automotive degreasers, mineral spirits or WD•40 can be used to remove rust preventative. Before using these products, though, test them on an inconspicuous area of your paint to make sure they will not damage it.*

⚠WARNING

NEVER clean with gasoline or other petroleum-based solvents. Most have low flash points, which make them extremely flammable. A risk of explosion and burning exists if these products are used. Serious personal injury may occur if this warning is ignored!

⚠CAUTION

ALWAYS work in well-ventilated areas far from possible ignition sources when using solvents to clean machinery. Many solvents are toxic when inhaled or ingested. Use care when disposing of waste rags and towels to be sure they DO NOT create fire or environmental hazards.

NOTICE

Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.

Basic steps for removing rust preventative:

1. Put on safety glasses and disposable gloves.

2. Coat all surfaces that have rust preventative with a liberal amount of your cleaner/degreaser and let them soak for few minutes.

3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily.

   Note: *To clean off thick coats of rust preventative on flat surfaces, such as tables, use a PLASTIC paint scraper to scrape off the majority of the coating before wiping it off with your rag. (Do not use a metal scraper or you may scratch your machine.)*

4. Repeat **Steps 2-3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

Site Considerations

Weight Load

Refer to **Specifications** on **Page 2** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for working clearances.**

⚠CAUTION

MAKE your shop "child safe." Ensure that your workplace is inaccessible to children by closing and locking all entrances when you are away. NEVER allow untrained visitors in your shop when assembling, adjusting or operating equipment.

Physical Environment

The physical environment where your machine is operated is important for safe operation and the longevity of its components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°–104°F; the relative humidity range exceeds 20–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

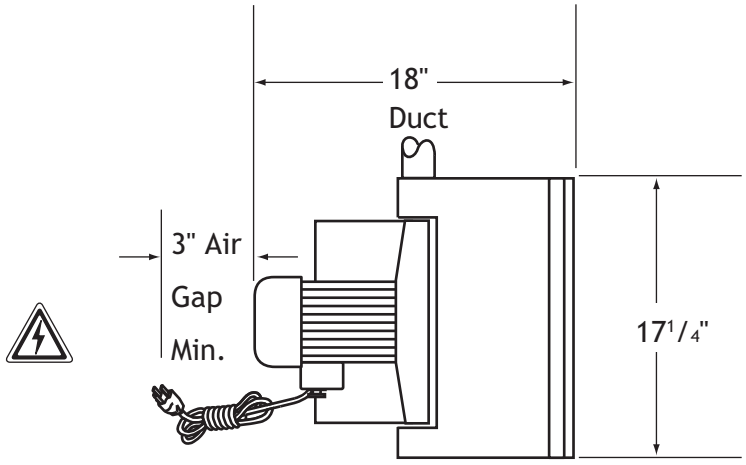


Figure 3. Minimum working clearances.

Mounting

We strongly recommend that you mount your sander to a workbench to prevent it from moving during operation. Before doing so, remove the included feet. An unexpected movement could result in an injury or property damage.

When you have chosen the location to mount the sander, the strongest option is a "Through Mount" where holes are drilled all the way through the workbench, and hex bolts, washers, and hex nuts are used to secure the machine (see **Figure 4**).

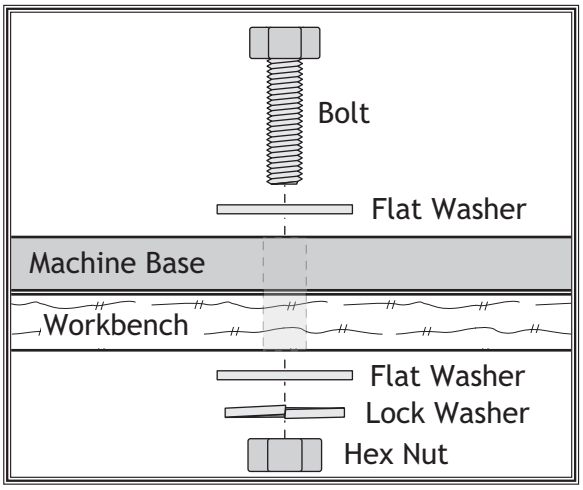


Figure 4. Example of a through mount.

Another option for mounting is a "Direct Mount" where the machine is simply secured to the workbench with a lag screw (see **Figure 5**).

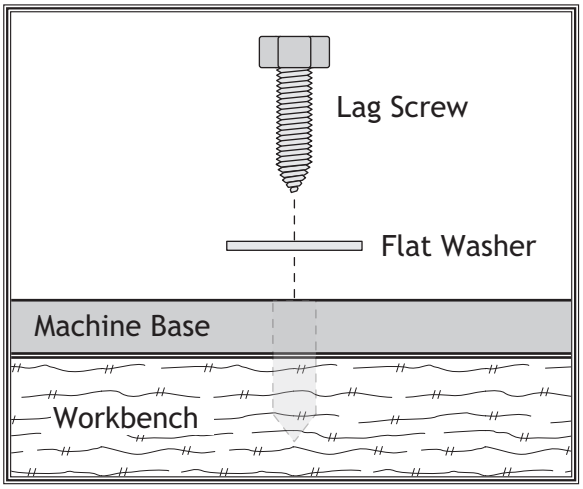


Figure 5. Example of a direct mount.

Dust Collection

Recommended CFM at 2" Dust Port:.....98 CFM

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must take into account many variables, including the CFM rating of the dust collector, the length of hose between the dust collector and the machine, the amount of branches or Y's, and the amount of other open lines throughout the system. Explaining this calculation is beyond the scope of this manual. If you are unsure of your system, consult an expert or purchase a good dust collection "how-to" book.

⚠CAUTION

DO NOT operate this machine without an adequate dust collection system. This machine creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.

The W1708 Model features a 2" dust port that can be connected to a dust collector or a dust collection system, using the components shown in **Figure 6.**

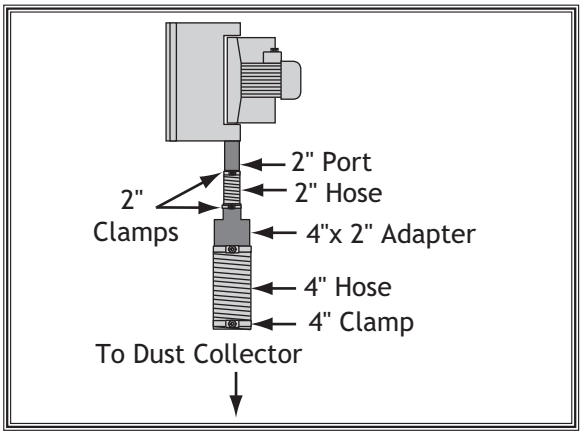


Figure 6. Example of sander hooked up to 4" hose.

Test Run

Test run your machine to make sure it runs properly and is ready for regular operation.

The test run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the safety disabling mechanism on the switch works correctly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review **Troubleshooting** on **Page 22**. If you still cannot remedy a problem, contact our Tech Support at (360) 734-3482 for assistance.

To test run the machine, do these steps:

1. Rotate the disc by hand to make sure it turns freely.

2. Make sure you have read the safety instructions at the beginning of the manual and that the machine is setup properly.

3. Make sure all tools and objects used during setup are cleared away from the machine.

4. Connect the machine to the power source.

5. Verify that the machine is operating correctly by turning the machine ***ON***.

—When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.

— Investigate and correct strange or unusual noises or vibrations before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

6. Turn the machine ***OFF***.

7. Remove the switch disabling key (**Figure 7**).

8. Try to start the machine with the paddle switch.

—If the machine does not start, the switch disabling feature is working as designed.

—If the machine starts, immediately stop the machine. The switch disabling feature is not working correctly. Call Tech Support for help.

WARNING

Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses to reduce the risk of injury.

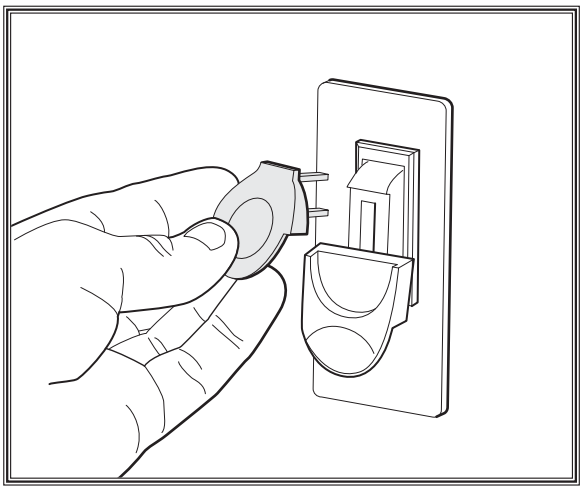


Figure 7. Removing switch key from paddle switch.

SETUP

OPERATIONS

General

This machine will perform many types of operations that are beyond the scope of this manual. Many of these operations can be dangerous or deadly if performed incorrectly.

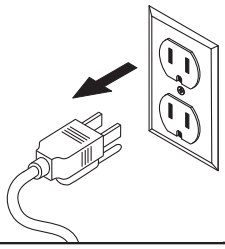
The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. **If at any time you are experiencing difficulties performing any operation, stop using the machine!**

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced *Disc Sander* operator before performing any unfamiliar operations. **Above all, your safety should come first!**

WARNING

READ and understand this entire instruction manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. DO NOT risk your safety by not reading!

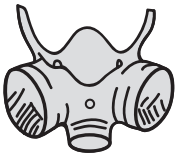
WARNING



DO NOT investigate problems or adjust the machine while it is running. Wait until the machine is turned *OFF*, unplugged and all working parts have come to a complete stop before proceeding!

WARNING

Damage to your eyes and lungs could result from using this machine without proper protective gear. Always wear safety glasses and a respiratoir when operating this machine.



Basic Controls

Refer to **Figure 8** and the following descriptions to become familiar with the basic controls of this machine.

Paddle Switch: Turns the motor ***ON*** when flipped up; turns motor ***OFF*** when pressed down.

Switch Disabling Key: Disables the switch when the yellow key is removed.

Table Tilt Lock Handles: Locks the table in place. To tilt the table, loosen the handles (**Figure 8**), tilt the work table to the desired angle, then retighten the handles.

The work table should be set approximately 1/16" away from the sanding disc to prevent fingers or workpieces from getting caught. To adjust the work table relative to the sanding disc, refer to in **Table/Disc Parallelism** on **Page 24.**

Miter Gauge: Moves workpieces into the sanding disc at a specific angle. To use the miter gauge, slide it into the miter slot, loosen the lock knob, set the angle, then tighten the knob.

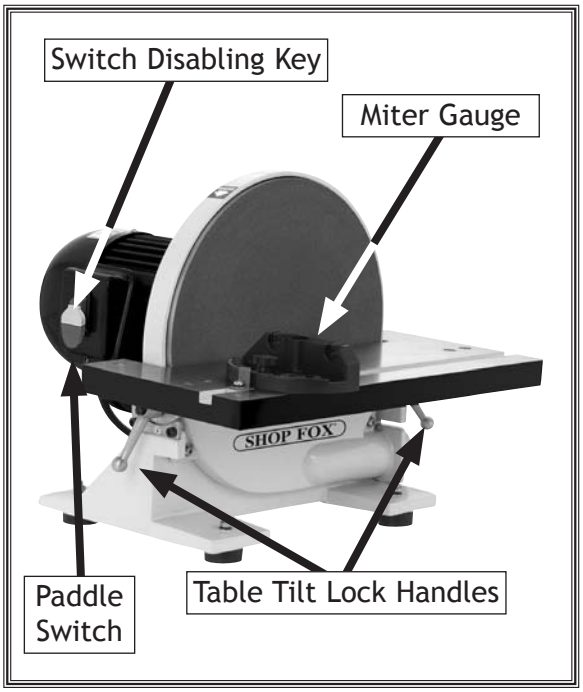


Figure 8. Basic controls.

Operation Overview

This overview gives you the basic process that happens during an operation with this machine. Familiarize yourself with this process to better understand the **Operations** section.

To complete a sanding operation, the operator does the following:

1. Examines the workpiece to make sure it is suitable for sanding.
2. Adjusts the table tilt, if necessary, to the required sanding angle, and locks the table in place.
3. Inserts the miter bar in the miter slot.
4. Adjusts the miter angle for the required sanding angle, and locks it in place.
5. Uses the appropriate clamping device or jig for small workpieces.

6. Wears safety glasses and a respirator, and locates push sticks if needed.

7. Starts the machine and dust collector.

8. Holds the workpiece firmly and flatly against both the table and miter, then pushes the workpiece along the sanding disc.

9. Moves the workpiece to different locations on the sanding disc to wear the sandpaper evenly and to prevent the sandpaper from overheating.

10. Stops the machine.

Sanding Tips

- Replace the sandpaper with a progressively higher grit to achieve a finer finish.

- Extend the life of the sandpaper by regularly using PRO-STICK® abrasive belt cleaners (see **Accessories** on **Page 20**).

- When sanding workpieces with a bow or crown, place the high point up on the table (prevents the workpiece from rocking) and take very light passes.

Choosing Sandpaper

The Model W1708 uses a 12" adhesive-backed sanding disc.

There are many types of sanding discs to choose from. We recommend aluminum oxide for general workshop environments. Below is a chart that groups abrasives into different classes and shows which grits fall into each class.

Grit	Type
24-36	Very Coarse
40-60	Coarse
80-100	Medium
120-180	Fine
220-360	Very Fine

The general rule of thumb is to sand a workpiece with progressively higher grit numbers, with no one grit increase of more than 50 grits at a time. Avoid skipping grits; the larger the grit increase, the harder it will be to remove the scratches from the previous grit.

Ultimately, the type of wood you use and your stage of finish will determine the best grit types to install on your sander.

Stock Inspection and Requirements

Some workpieces are not safe or may require modification before they are safe to sand. **Before sanding, inspect all workpieces for the following:**

- ***Material Type:*** This machine is intended for ONLY sanding natural and man-made wood products. This machine is NOT designed to sand metal, glass, stone, tile, drywall or cementitious backerboard.

- ***Foreign Objects:*** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While sanding, these objects can become dislodged and tear the sanding belt. Always visually inspect your workpiece for these items. If they can't be removed, DO NOT sand the workpiece.

- ***Excessive glue or finish:*** Sanding workpieces with excess glue or finish will load up the abrasive, reducing its usefullness and lifespan.

- ***Workpiece Dimensions*:** DO NOT sand boards less than 9" long, 1/8" wide and 1/16" thick to prevent damage to the workpiece and to reduce the risk of your hands contacting the abrasive belt (see **Figure 9**).

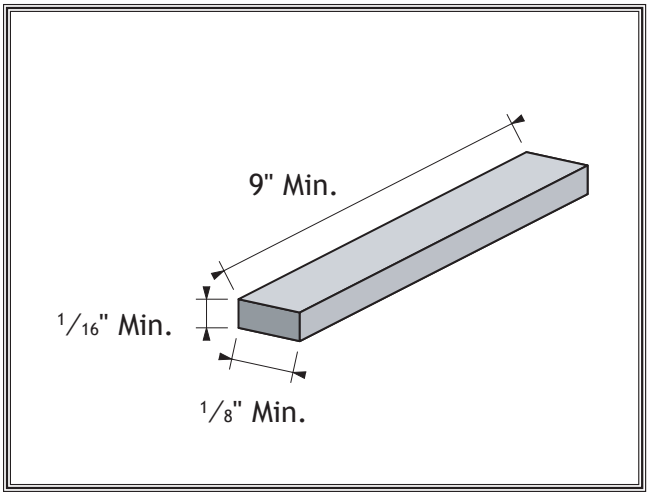


Figure 9. Minimum dimensions for sanding.

Attaching Sandpaper

The Model W1708 sander accepts 12" diameter adhesive-backed sanding discs. These are available in a variety of grits (refer to **Page 20**).

The sanding disc sticks to the surface of the cast iron disc platen, using the pressure sensitive adhesive backing (PSA). The sandpaper can be replaced without removing the table.

To attach sandpaper, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Peel-off the old sandpaper, and clean the disc surface with mineral spirits, and wipe dry.

3. Peel-back the protective layer on ***one-half*** of the sandpaper disc and fold it against the remaining half.

4. Slip the half with the protective layer between the disc and the table edge (**Figure 10**).

5. Position the exposed adhesive on the upper half of the disc that extends above the table. Once it is positioned evenly across the disc, press the adhesive onto the surface.

6. Now rotate the disc so the lower half is above the table and peel-off the other half of the protective paper (**Figure 11**), and press the sanding disc against the disc so adhesion is complete.

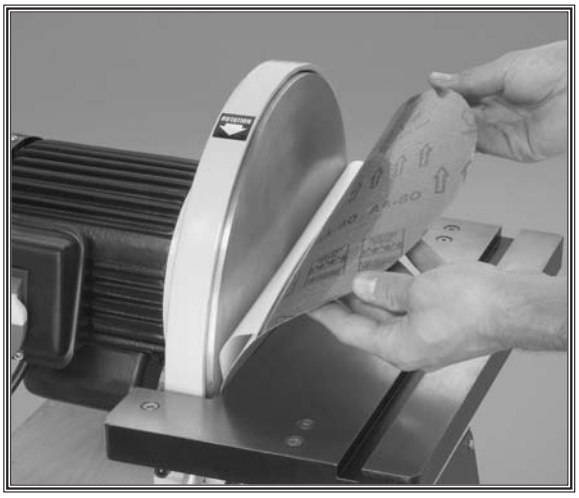


Figure 10. Slipping covered sandpaper between disc and table.

Figure 11. Removing paper backing.

Disc Sanding

To perform 90˚ disc sanding, do these steps:

Figure 12. 90˚ disc sanding.

1. Set the tilt angle of the table to 0˚. The angle can be set with the angle gauge on the sander or with a protractor for greater accuracy.

2. Set the miter gauge to 90˚, then place one face of the workpiece firmly against the miter gauge.

3. Turn the sander ***ON***, then ease the workpiece into the left half of the sanding disc that is spinning downward, making sure the workpiece is against the disc, as shown in **Figure 12**.

4. Move the workpiece side-to-side across the downward spinning surface of the disc to prevent build-up on the sanding disc and burning of the workpiece.

5. Turn the sander ***OFF***.

   Note: *For sanding curves or irregular shapes, remove the miter gauge from the disc table. Always keep the workpiece on the side of the wheel that is rotating down toward the table. This will keep the workpiece from flying out of your hands from the rotational forces.*

Miter Sanding

The most efficient way to get a perfect miter is to cut the workpiece slightly long and sand it to the desired dimension. Miter sanding can be done easily with the miter gauge.

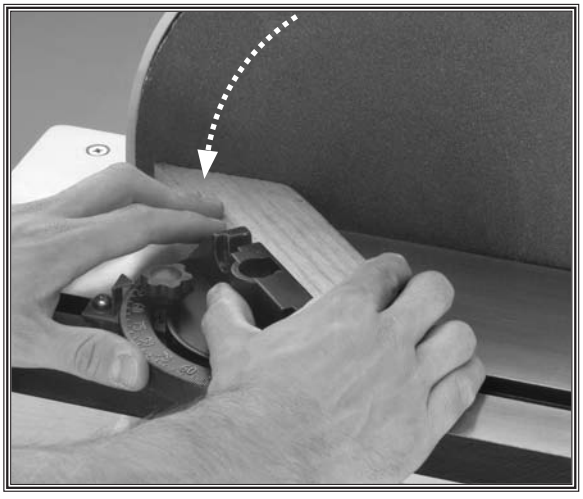


Figure 13. Miter sanding.

To perform miter sanding, do these steps:

1. Loosen the knob on the miter gauge and adjust the angle to the desired point. Tighten the knob.

2. Slide the miter gauge into its slot and use it to hold your workpiece in position.

   Note: *The miter gauge can be used in either direction in the slot to achieve the proper relation of the workpiece to the disc.*

3. Turn the sander ***ON***, and with light, but firm pressure, push the workpiece slowly into the down-spin (left) side of the rotating disc (see **Figure 13**). When finished, turn the sander ***OFF***.

Angle Sanding

To perform angle sanding operations, do these steps:

1. Loosen the handles securing the table, use the angle gauge to set the tilt angle, then tighten the table lock handles.

2. Turn the sander ***ON***.

3. Use the miter gauge to hold your workpiece in position, and with light, but firm pressure, push the workpiece slowly into the down-spin side of the rotating disc (see **Figure 14).**

4. When finished, turn the sander ***OFF*.**

Figure 14. Sanding with table angled.

ACCESSORIES

Disc Sander Accessories

The following Disc Sander accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.

12" aluminum oxide sanding discs are available in two packs:

Model	Grit
D1335	60 Grit
D1336	80 Grit
D1337	100 Grit
D1338	120 Grit
D1339	160 Grit
D1340	180 Grit
D1341	220 Grit

The **PRO-STICK®** abrasive surface cleaners can extend the life of your sanding discs. Simply press the cleaner lightly against moving sanding discs to remove clogged-up pitch and sawdust.

Size	Model
1 3/8" x 1 3/8" x 4 1/4"	W1304
1 3/8" x 1 3/8" x 8 1/2"	W1305
1 1/2" x 1 1/2" x 8 1/2"	W1306
2" x 2" x 12"	W1307

The Shop Fox **Deluxe Celing Mounted 3-Speed Air Cleaner, Model W1690,** is an essential machine for any shop creating dust. This machine filters out tiny dust particles that can raise big health concerns.

MAINTENANCE

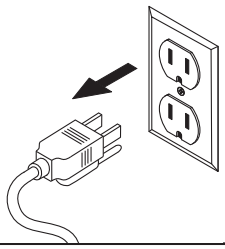
General

Regular periodic maintenance on your machine will ensure its optimum performance. Make a habit of inspecting your machine each time you use it.

Check for the following conditions and repair or replace when necessary:

- Loose mounting bolts.
- Worn, loose, or damaged sanding disc.
- Worn or damaged cords and plugs.
- Any other condition that could hamper the safe operation of this machine.

⚠WARNING



MAKE SURE that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.

Cleaning

Cleaning the Model W1708 is easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it. Treat all unpainted cast iron and steel with a non-staining lubricant after cleaning.

Unpainted Cast Iron

Protect the unpainted cast iron surfaces on the table by wiping the table clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces.

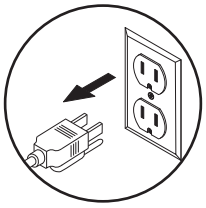
The table can be kept rust-free with regular applications of products like SLIPIT®. For long term storage you may want to consider products like Boeshield T-9™.

Lubrication

Since all bearings are sealed and permanently lubricated, simply leave them alone until they need to be replaced. Do not lubricate them.

SERVICE

Troubleshooting



This section covers the most common problems and corrections with this type of machine. **WARNING! DO NOT make any adjustments until power is disconnected and moving parts have come to a complete stop!**

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: **tech-support@shopfox.biz**.

Motor & Electrical

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start.	1. Switch disabling key removed. 2. Break or short in wiring, loose connections,plug or receptacle is corroded or miswired. 3. Power supply switched off/has incorrect voltage. 4. Blown fuse/tripped circuit breaker at main panel. 5. Motor connection wired incorrectly. 6. Motor ON/OFF switch at fault. 7. Start capacitor has blown. 8. Centrifugal switch at fault. 9. Motor at fault.	1. Reinstall switch disabling key. 2. Trace/replace broken or corroded wires, fix loose connections, correct wiring. 3. Switch power supply on/verify voltage. 4. Correct the cause of overload, then reset/replace fuse or breaker. 5. Wire motor correctly (refer to inside junction box-cover). 6. Replace switch. 7. Test/replace if at fault. 8. Adjust/replace centrifugal switch. 9. Test for shorted windings or bad bearings; repair or replace.
Machine has excessive vibration or noise.	1. Workpiece loose or incorrectly secured. 2. Motor fan rubbing on fan cover. 3. Motor mounting loose. 4. Lock handle is loose. 5. Machine incorrectly mounted to bench. 6. Centrifugal switch out of adjustment; at fault. 7. Motor bearings worn or damaged.	1. Use correct holding fixture and re-clamp workpiece. 2. Fix/replace fan cover; replace loose or damaged fan. 3. Tighten mounting bolts/nuts; use thread locking fluid. 4. Tighten the lock handle. 5. Level/shim base; tighten/adjust mounting hardware or feet. 6. Adjust/replace centrifugal switch. 7. Replace motor bearings or replace motor.

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine stalls or slows when operating.	1. Too much pressure when feeding workpiece 2. Workpiece is warped. 3. Workpiece is incorrect for machine. 4. Motor connection wired incorrectly. 5. Motor overheated. 6. Centrifugal switch at fault. 7. Motor at fault.	1. Reduce pressure when feeding workpiece. 2. Straighten workpiece or use a different one. 3. Only sand wood and ensure moisture is below 20%. 4. Review wiring diagram on motor cover; correct wire-connections. 5 Let cool, clean motor, and reduce workload. 6. Adjust/replace centrifugal switch if available. 7. Test, repair, or replace motor.

Workpiece Finish

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Miter bar loose or binds in miter slot.	1. Miter slot dirty or gummed up.	1. Carefully clean miter slot.
Workpiece angle incorrect or out of square.	1. Pointer or scale is not calibrated correctly.	1. Adjust pointer to reflect real path of cut or angle of the table.
Sandpaper clogs quickly or burns.	1. Sandpaper grit is too fine for the job. 2. Workpiece is too moist. 3. Sanding depth too aggressive. 4. Paint, varnish, pitch, or other coating is loading up sandpaper. 5. Sanding soft workpiece.	1. Replace with a coarser grit sandpaper. 2. Allow workpiece to dry out. 3. Reduce sanding depth or install coarser sandpaper. 4. Install a coarse grit sandpaper, or strip coating off before sanding. 5. Use different stock. Or, accept the characteristics of the stock and plan on cleaning/replacing discs frequently.
Glossy spots, burning, or streaks on workpiece.	1. Sandpaper too fine for the desired finish. 2. Work held still for too long. 3. Workpiece is too moist. 4. Sanding stock with high residue. 5. Worn sandpaper. 6. Sanding depth too aggressive.	1. Use a coarser grit sandpaper. 2. Do not keep workpiece in one place for too long. 3. Allow workpiece to dry out. 4. Use different stock. Or, accept the characteristics of the stock and plan on cleaning/replacing sandpapers frequently. 5. Replace sandpaper. 6. Reduce sanding depth or install coarser sandpaper.
Abrasive rubs off easily.	1. Sandpaper has been stored in an incorrect environment.	1. Store sandpaper away from extremely dry, hot, or damp conditions.

Table/Disc Parallelism

The edge of the table must be parallel with the face of the sanding disc, and there should be a 1/16" gap between the two. This gap should be large enough so that the sandpaper does not rub against the table, but small enough so that the gap is not a pinch hazard.

To make the table and sanding disc parallel, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Using a 10mm wrench and Phillips head screwdriver loosen the six flat head screws and hex nuts that secure the table to the table support brackets.

3. Adjust the table so that there is a 1/16" gap (**Figure 15**) between the 12" disc (with sandpaper installed) and the table, from left to right.

4. When the table is parallel with the sanding disc, tighten the flat head screws and hex nuts.

5. Spin the disc by hand to check if the sandpaper is touching the table.

   Note: *DO NOT turn the disc sander on at this point.*

6. Re-adjust the table parallelism if the sandpaper touches the table at any point in its rotation.

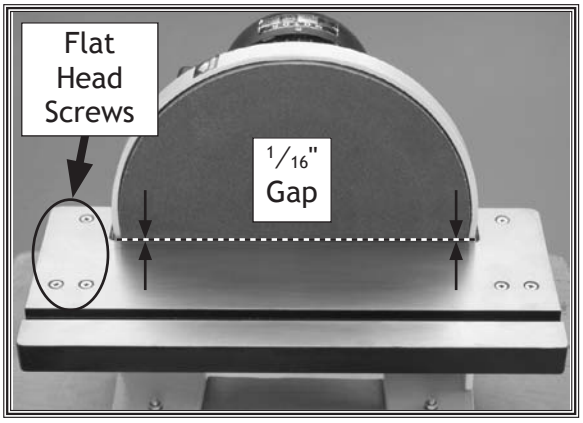


Figure 15. Table parallel with sanding disc.

Miter Gauge Calibration

At 90° the miter gauge should be perpendicular to the face of the wheel when it is mounted in the table slot. If not, follow this procedure.

To calibrate the miter gauge, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Use a try square or machinist's square with one edge against the face of the miter gauge and the other against the disc face, as shown in **Figure 16.**

3. Loosen the lock knob on the miter gauge and adjust the face of the miter gauge so it is flush with the edge of the square, tighten the gauge lock knob, and verify the setting.

4. Using a Phillips head screwdriver, loosen the degree scale pointer, position the pointer on 90°, then retighten the screw.

5. Recheck the miter scale accuracy with the square.

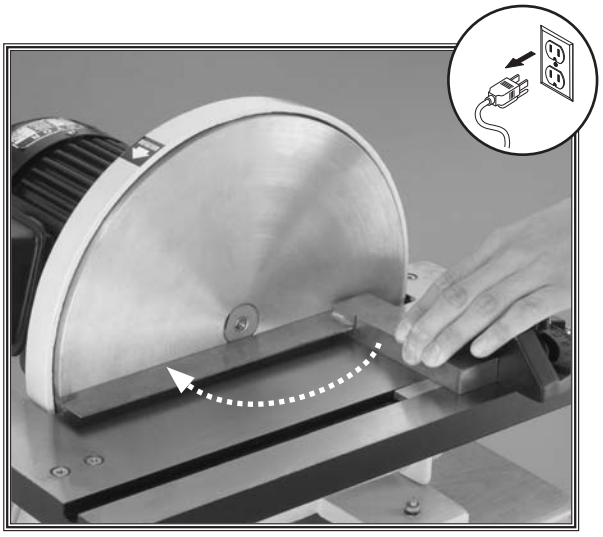


Figure 16. Squaring miter gauge to disc.

Table Tilt Calibration

When the table tilt is set to 0˚, the table should be positioned perpendicular to the sanding disc face. If not follow this procedure.

To calibrate the table tilt, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Using a try square or machinist's square, set one edge on the table surface and the other against the face of the disc, as shown in **Figure 17.**

   Note: *This can be done with the sandpaper installed, although it is somewhat more precise if the sandpaper is not installed.*

3. Loosen the lock handles and adjust the table angle until it is perfectly perpendicular to the disc, then tighten the lock handles while holding the table in place.

4. If the angle pointer stickers on both ends do not point to 0˚, remove them and place them on the trunnion so they point to 0˚.

5. Recheck the scale accuracy with the square.

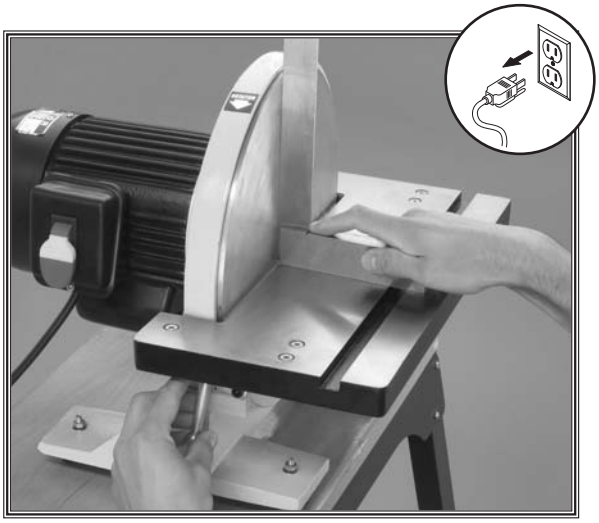


Figure 17. Squaring the table.

Electrical Safety Instructions

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Study this diagram carefully. If you notice differences between your machine and these wiring diagrams, call Woodstock International Technical Support at (360) 734-3482.

⚠WARNING

1. **SHOCK HAZARD.** Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

2. **QUALIFIED ELECTRICIAN.** Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.

3. **WIRE CONNECTIONS.** All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

4. **WIRE/COMPONENT DAMAGE.** Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

5. **MOTOR WIRING.** The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

6. **MODIFICATIONS.** Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

7. **CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to five minutes after being disconnected from the power source. To avoid being shocked, wait at least this long before working on these components.

8. **ELECTRICAL REQUIREMENTS.** You MUST follow the electrical requirements at the beginning of this manual when connecting your machine to a power source.

9. **EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

NOTICE

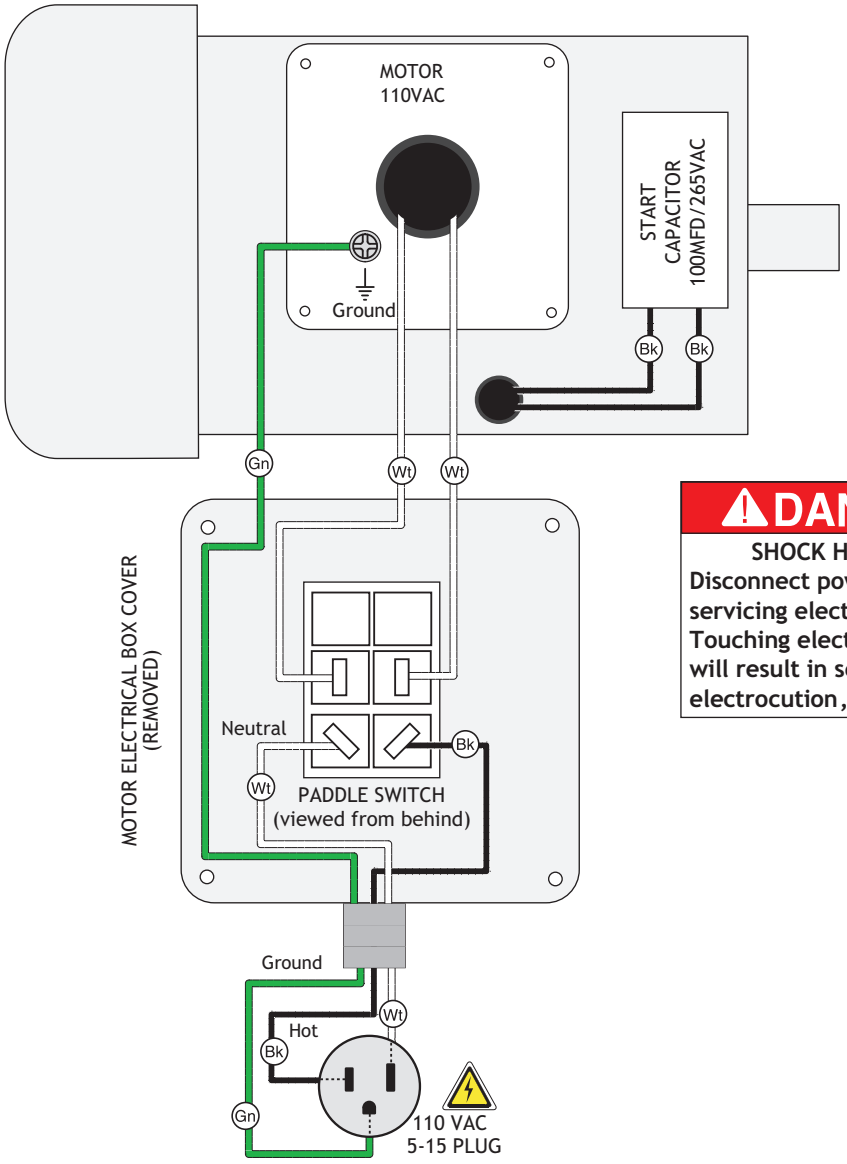
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.shopfox.biz.

WIRING DIAGRAM COLOR KEY

BLACK	Bk	BLUE	Bl	YELLOW	Yl	LIGHT BLUE	Lb
WHITE	Wt	BROWN	Br	YELLOW GREEN	Yg	BLUE WHITE	Bw
GREEN	Gn	GRAY	Gy	PURPLE	Pu	TUR-QUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

SERVICE

Wiring Diagram



DANGER

SHOCK HAZARD!
Disconnect power before servicing electrical parts. Touching electrified parts will result in severe burns, electrocution, or death.

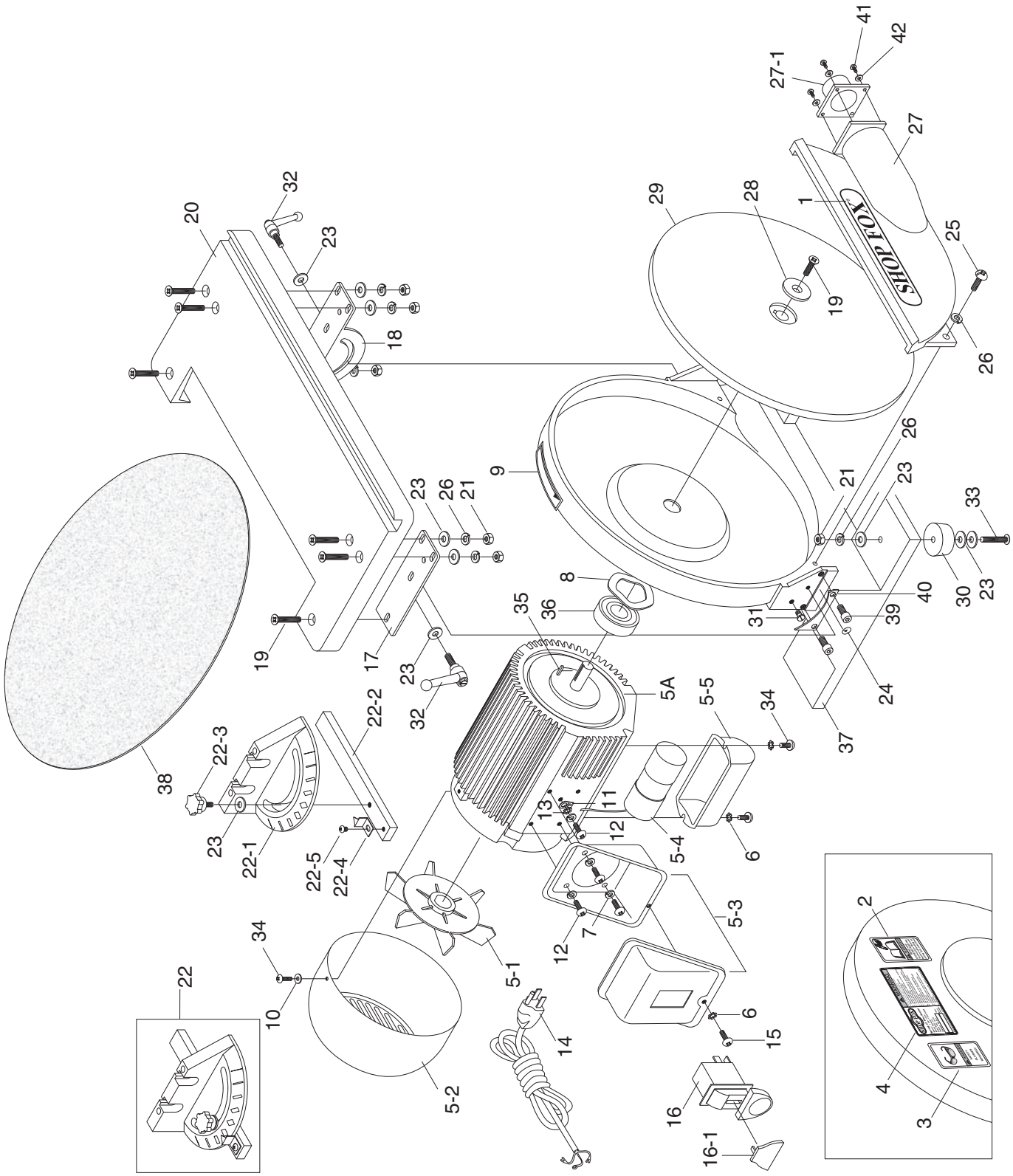
NOTICE

This motor wiring diagram is current at the time of printing; however, any wiring diagram on the motor will supersede this and should be used instead when rewiring your motor.

Read Page 27 STOP Before Wiring

PARTS

Main Breakdown



Main Parts List

REF	PART #	DESCRIPTION
1	X1708001	SHOP FOX LOGO LABEL
2	XLABEL-12	READ MANUAL LABEL
3	XLABEL-11	SAFETY GLASSES LABEL
4	X1708004	MACHINE ID LABEL
5A	X1708005A	MOTOR 1HP 110V 60 HZ
5-1	X1708005-1	MOTOR FAN
5-2	X1708005-2	FAN COVER
5-3	X1708005-3	WIRING BOX
5-4	XPC100C	S CAPACITOR 100M 265V 1-3/8 X 3-1/8
5-5	X1708005-5	CAPACITOR COVER
6	XPTLW01M	EXT TOOTH WASHER 4MM
7	XPLW01M	LOCK WASHER 5MM
8	X1708008	WAVY WASHER 39MM
9	X1708009	ROTATION ARROW LABEL
10	XPW05M	FLAT WASHER 4MM
11	X1708011	GROUND INDICATOR
12	XPS09M	PHLP HD SCR M5-.8 X 10
13	XPTLW02M	EXT TOOTH WASHER 5MM
14	X1708014	CORD & PLUG
15	XPS17M	PHLP HD SCR M4-.7 X 6
16	XPSW09	PADDLE SWITCH 110/220V
16-1	XPSW09-1	SWITCH KEY
17	X1708017	RIGHT TRUNNION
18	X1708018	LEFT TRUNNION
19	XPFH06M	FLAT HD SCR M6-1 X 20
20	X1708020	WORK TABLE
21	XPN01M	HEX NUT M6-1

REF	PART #	DESCRIPTION
22	X1708022	COMPLETE MITER GAUGE
22-1	X1708022-1	MITER GAUGE BODY
22-2	X1708022-2	GAUGE SLIDE
22-3	X1708022-3	KNOB BOLT M6-.1 X 22
22-4	X1708022-4	ANGLE POINTER
22-5	XPS19M	PHLP HD SCR M5-.8 X 6
23	XPW03M	FLAT WASHER 6MM
24	X1708024	TABLE ANGLE REFERENCE LABEL
25	XPS26M	PHLP HD SCR M6-1 X 20
26	XPLW03M	LOCK WASHER 6MM
27	X1708027	DUST CHUTE COVER
27-1	X1708027-1	DUST CHUTE HOSE ADAPTER
28	X1708028	SANDING DISC WASHER 1/4" X 1-1/4"
29	X1708029	SANDING DISC
30	X1708030	RUBBER FOOT
31	X1708031	STOP SCREW
32	X1708032	TABLE LOCK LEVER ASSY
33	XPS47M	PHLP HD SCR M6-1 X 25
34	XPS07M	PHLP HD SCR M4-.7 X 8
35	XPK23M	KEY 5 X 5 X 25
36	XP6204ZZ	BALL BEARING 6204 ZZ
37	X1708037	BASE
38	X1708038	SANDING DISC 80 GRIT
39	XPSB26M	CAP SCREW M6-1 X 12
40	X1708040	TRUNNION REST
41	XPS08M	PHLP HD SCR M5-.8 X 12
42	XPW02M	FLAT WASHER 5MM

⚠WARNING

Safety labels warn about machine hazards and how to prevent machine damage or injury. The owner of this machine MUST maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, REPLACE that label before allowing the machine to enter service again. Contact Woodstock International, Inc. at (360) 734-3482 or www.shopfoxtools.com to order new labels.

Warranty Registration

Name_____

Street _____

City _____ State_____ Zip_____

Phone #_____ Email_____ Invoice #_____

Model #_____ Serial #_____ Dealer Name_____ Purchase Date_____

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.***

1. How did you learn about us?

_____ Advertisement _____ Friend ____ Local Store
_____ Mail Order Catalog _____ Website ____ Other:

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

_____ 0-2 Years _____ 2-8 Years ____ 8-20 Years _____ 20+ Years

3. How many of your machines or tools are Shop Fox?

_____ 0-2 _____ 3-5 ____ 6-9 _____ 10+

4. Do you think your machine represents a good value? _____ Yes ____ No

5. Would you recommend Shop Fox products to a friend? _____ Yes ____ No

6. What is your age group?

_____ 20-29 _____ 30-39 ____ 40-49
_____ 50-59 _____ 60-69 ____ 70+

7. What is your annual household income?

_____ $20,000-$29,000 _____ $30,000-$39,000 ____ $40,000-$49,000
_____ $50,000-$59,000 _____ $60,000-$69,000 ____ $70,000+

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

____ Cabinet Maker
____ Family Handyman
____ Hand Loader
____ Handy
____ Home Shop Machinist
____ Journal of Light Cont.
____ Live Steam
____ Model Airplane News
____ Modeltec
____ Old House Journal
____ Popular Mechanics
____ Popular Science
____ Popular Woodworking
____ Practical Homeowner
____ Precision Shooter
____ Projects in Metal
____ RC Modeler
____ Rifle
____ Shop Notes
____ Shotgun News
____ Today's Homeowner
____ Wood
____ Wooden Boat
____ Woodshop News
____ Woodsmith
____ Woodwork
____ Woodworker West
____ Woodworker's Journal
____ Other:

9. Comments:_____

_____

_____

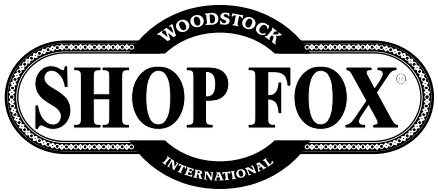
_____

_____

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE

Place
Stamp
Here



WOODSTOCK INTERNATIONAL INC.
P.O. BOX 2309
BELLINGHAM, WA 98227-2309

FOLD ALONG DOTTED LINE

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

WARRANTY

Woodstock International, Inc. warrants all Shop Fox machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair or replace, at its expense and at its option, the Shop Fox machine or machine part, which in normal use has proven to be defective, provided that the original owner returns the product prepaid to a Shop Fox factory service center with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.'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 that Shop Fox machinery complies with the provisions of any law or acts. In no event shall Woodstock International, Inc.'s liability under this warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. 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.

Every effort has been made to ensure that all Shop Fox machinery meets high quality and durability standards. We reserve the right to change specifications at any time because of our commitment to continuously improve the quality of our products.

High Quality Machines and Tools

Woodstock International, Inc. carries thousands of products designed to meet the needs of today's woodworkers and metalworkers. Ask your dealer about these fine products:

BROSEM® PRECISION STOP BLOCK

THE REBEL®

BOARD BUDDIES®

PLANER PAL®

SLICKPLANE®

ACCU-SHARP®

ROMAN CARBIDE®

JOINTER PAL®

DURASTICK®

SOUTH BEND™

STEELEX® FINE TOOLS

STEELEX® PLUS

Rotacator®

Gutmann®

Junglee®

PARROT VISE®

PRO-STIK® ABRASIVE BELT & DISC CLEANER

Aluma-Classic®

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