HAFCO WOODMASTER

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Instruction Manual

TWIN DRUM SANDER
DS-660

Order Code: (L1296)

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IMPORTANT SAFETY INSTRUCTIONS

⚠WARNING ***READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.***

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, feather boards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention.

Always use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it. Figure out an alternative procedure that feels safer.

REMEMBER: Your personal safety is your responsibility.

WARNING!

Read and understand the instructions in this manual, before operating this machine to reduce the risk of serious injury or even death. Save all warnings and instructions for future reference.

SAFETY GUIDELINES

This manual contains information that is important for you to know and understand. This information relates to protecting YOUR SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the symbols below. Please read the manual and pay attention to these sections.

⚠ 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.

GENERAL SAFETY RULES

⚠ WARNING WARNING FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

- FOR YOUR OWN SAFETY, READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE OPERATING THE UNIT. Learn the unit's application and limitations as well as the specific hazards peculiar to it.
- KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
- DON'T USE IN DANGEROUS ENVIRONMENT. Don't use this unit in damp or wet locations, or expose it to rain. Keep work area well-lighted.
- KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area.
- DISCONNECT UNIT before servicing.
- CHECK DAMAGED PARTS. Before further use of the unit, properly repair or replace any part that is damaged

⚠ WARNING FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS INJURY.

1. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
2. Replace the warning labels if they become obscured or removed.
3. This Dual Drum Sander is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a drum sander, do not use until proper training and knowledge have been obtained.
4. Do not use this machine for other than its intended use. If used for other purposes, HAFCO Woodmaster disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
5. Always wear approved safety glasses/face shields while using this Dual Drum Sander.
6. Before operating this drum sander, remove tie, rings, watches and other jewellery, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do not wear gloves.
7. Wear ear protectors (plugs or muffs) during extended periods of operation.
8. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

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

Your risk of exposure 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 face or dust masks that are specifically designed to filter out microscopic particles.

1. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
2. Make certain the switch is in the OFF position before connecting the machine to the power source.
3. Make certain the machine is properly grounded.

4. Make all machine adjustments or maintenance with the machine unplugged from the power source.
5. Form a habit of checking to see that all extra equipment such as adjusting keys, wrenches, scrap, stock, and cleaning rags are removed away from the machine before turning on.
6. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately when maintenance is complete.
7. Make sure the drum sander is firmly secured to the floor before use.
8. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
9. Provide for adequate space surrounding work area and non-glare, overhead lighting.
10. Keep the floor around the machine clean and free of scrap material, oil and grease.
11. Keep visitors a safe distance from the work area. Keep children away.
12. Make your workshop child proof with padlocks, master switches or by removing starter keys.
13. Give your work undivided attention. Looking around, carrying on a conversation and “horseplay” are careless acts that can result in serious injury
14. Maintain a balanced stance at all times so that you do not fall or lean against the sanding belt or other moving parts. Do not overreach or use excessive force to perform any machine operation.
15. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
16. Use recommended accessories; improper accessories may be hazardous.
17. Maintain machinery with care. Follow instructions for lubricating and changing accessories.
18. Turn off the machine before cleaning. Use a brush or compressed air to remove dust or debris — do not use your hands.
19. Do not stand on the machine. Serious injury could occur if the machine tips over.
20. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
21. At all times hold the stock firmly.

WARNING!

There is potential danger when operating any machine. Accidents are frequently caused by failure to pay attention or a lack of familiarity. Always use the machine with respect and caution to reduce the risk of operator injury. When normal safety precautions are overlooked or ignored, serious personal injury can occur.

SAVE THESE INSTRUCTIONS.
Refer to them often and use them to instruct others.

KEY FEATURES AND COMPONENTS

1. Variable speed feed belt
2. 3hp continuous duty motor
3. Dual 26” drums
4. Sanding elevation digital readout
5. Elevation crank handle
6. Switch assembly
7. Dust Ports

CAUTION!

A prepared list of safety guidelines can never be complete. Every workshop environment is different. Always consider Safety first, as it applies to your individual working conditions. Use this machine and other machinery with caution and respect. Failure to do so could result in serious Personal injury, damage to the equipment, or poor work results.

FUNCTIONAL DESCRIPTION

This 660mm Dual Drum Sander is specifically designed to handle both rough and final sanding processes in a single pass. This machine features an adjustable height automatic feed table and comes with 80-grit and 120-grit pre-cut sanding belts already installed. This dual drum sander is powered by a 3HP continuous duty sealed motor with a variable speed feed that enables you work at 0.93~6.2 M/Min. The wide feed belt accepts stock as big as 647mm and allows you to sand pieces up to 127mm thick.

PRODUCT SPECIFICATIONS

DRUM MOTOR SPECIFICATION	
Type	Induction Ball bearing/ Continuous Duty
Horsepower	3HP
Amps	15
Voltage	240
Phase	Single
Hertz	50Hz
RPM	2850
BELT FEED MOTOR SPECIFICATIONS	
Type	Universal
Horsepower	1/6hp
PRODUCT SPECIFICATIONS	
Maximum sanding width	660mm
Maximum board thickness	127mm

Minimum board thickness	6mm
Minimum board length	150mm
Feed Speed	0.93 - 6.2m/min
Number of Sanding Drums	2
Drum Size	150x660mm
Drum Speed	1280
Drum Diameter	125
Dust Ports	2 x 100mm
PRODUCT DIMENSIONS	
Footprint	452 x 1095
Length	788mm
Width	1220mm
Height	1345mm
Weight	223kg

UNPACKING

⚠ WARNING The machine is heavy, be careful when removing it from the shipping container! Failure to comply may cause serious injury and/or damage to the sander and/or property!

Your Dual Drum Sander comes packed in a single container. Use a safety strap to avoid tip over when lifting machine. Check shipping carton and machine for damage before unpacking.

Open the shipping container. Carefully remove packaging materials, parts and machine from shipping carton.

Always check for and remove protective shipping materials around motors and moving parts. Lay out all parts on a clean work surface and check that all parts are present and in good condition:

DESCRIPTION (QUANTITY)

HAFCO Woodmaster 660mm Dual Drum Sander (1)

8-10mm Open End Wrench (1)

Elevation Handle (1)

Compare the items to inventory figures; verify that all items are accounted for before discarding the shipping box. Report any missing or damaged parts to your distributor or dealer. Prior to tool assembly and use, read this manual thoroughly to familiarize yourself with proper assembly, maintenance and safety procedures.

Remove any protective materials and coatings from all of the parts and the drum sander. The protective coatings can be removed by spraying WD-40 on them and wiping it off with a soft cloth. This may need to be redone several times before all of the protective coatings are removed completely.

⚠ WARNING If any parts are missing, do not attempt to plug in the power cord and turn “ON” the machine. The machine should only be turned “ON” after all the parts have been obtained and installed correctly.

ASSEMBLY

TOOLS REQUIRED

Hex key

SECURE SWITCH BOX TO FRAME

Tools Required: Hex key
Parts: None
Hardware Needed: Two 10mm hex head screws

1. Locate the two threaded holes on the upper left side of the machine (A) as shown in Fig. 2.
2. Attach the two hex head screws to the mounting plate.
3. Mount switch assembly to the machine frame by aligning the mounting holes in the switch assembly over the screw threads in the top of the machine and push securely into position with the two socket head cap screws.
4. Tighten screws using hex key.

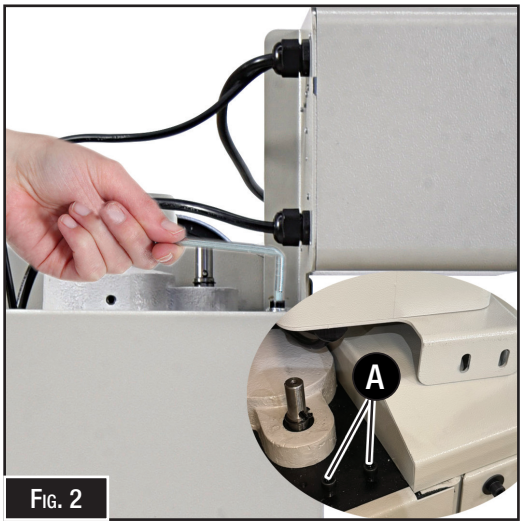


Fig. 2

ASSEMBLE TABLE ELEVATION CRANK AND HANDLE

Tools Required: Hex Key
Parts: Table Elevation Hand wheel
Hardware Needed: None

1. Install the table elevation hand wheel by aligning the pin located on the shaft with the keyway in the hand wheel.
2. Secure the hand wheel with the hex head screw.

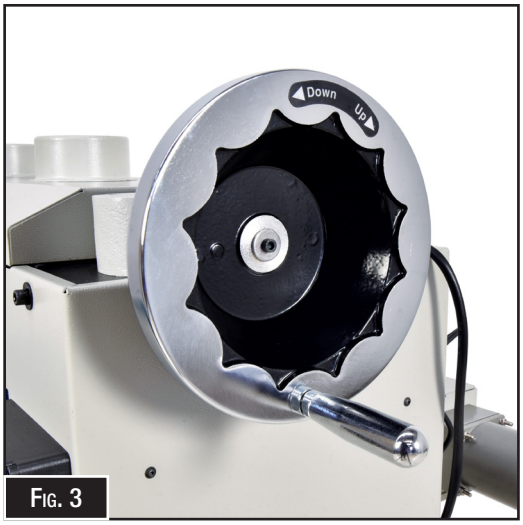


Fig. 3

CONNECT DUST COLLECTOR TO DUST COLLECTION PORT

Tools Required: Flat head screwdriver
Parts: Dust Collector and Hose (Not Supplied)
Hardware Needed: Two 4” Ring Clamps (not provided)

Your Dual Drum Sander is equipped with two 4-inch dust collection ports. These must be connected to dust collector hoses to ensure safe operation.

Do not attempt to operate this tool without first connecting it to an adequate dust collection system.

1. Fit a 4” ring clamp over the end of each dust collection hose.
2. Place a dust collection hose over each dust collection port and tighten ring clamp with the flat screwdriver.

CONTROL PANEL

CONTROLS

The purpose of this control overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, and the machine controls and what they do. It also helps the operator to understand if they are discussed later in this manual.

NOTE: DO NOT start the machine until all of the setup instructions have been performed. Operating a machine that is not setup may result in malfunction or unexpected results that can lead to serious injury, death or damage to the machine or property.

A. **LOAD METER:** Displays the percentage of available motor power. When the meter needle reaches the Yellow section it is advisable to reduce the pressure on the drums. The machine should only run for a short period. (Fig. 4)

   If the red section is reached the machine's operation should be reduced immediately

B. **POWER LIGHT:** Indicates that power is active in the control panel and the machine is ready for use.

C. **TABLE MOVEMENT ON/OFF:** This switches ON or OFF the speed feed control knob of the feed belt

D. **TABLE FEED SPEED KNOB:** This knob controls the speed of the feed belt

E. **ON/OFF DRUM DRIVE MOTOR:** These buttons are used to switch the drive motor of the drums either ON or OFF

F. **EMERGENCY STOP BUTTON:** This button when pressed cuts power to the table and drive motor and cannot be restarted until the button has been rest.

Fig. 4

EMERGENCY STOP BUTTON

TESTING THE EMERGENCY STOP BUTTON (Fig. 5)

Before using the machine, make sure that the emergency button is working correctly

1. Twist the top of the Emergency Stop button to ensure that it is in the raised position.
2. Start the machine and then press the emergency stop button. The machine should stop and the power should be cut off. If the machine cannot be started then the emergency stop is working correctly.
3. To reset the Emergency Stop twist the red top until it pops up. The machine should now work again.

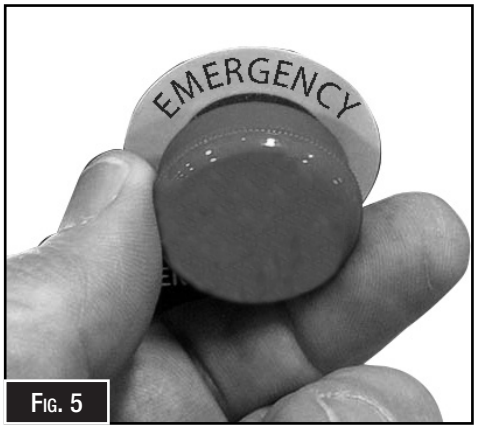


Fig. 5

ADJUSTMENTS

TO REPLACE THE SANDING BELT

1. Lift the upper guard up and tilt it toward the rear of the machine to expose the drums.
2. Locate the spring-loaded locking clamp (A) on the right end of the drum. Squeeze the clamp open and remove the end of the sanding belt (B) from the drum slot. See Fig. 6.
3. Slowly pull the old sanding belt off the drum.
4. Squeeze the spring-loaded locking clamp on the left end of the drum and remove the old sanding belt.
5. Squeeze the spring-loaded locking clamp on the left end of the drum and insert the end of the new sanding belt approximately 2 inches into the drum slot.
6. Release the clamp to lock the belt end in place.
7. Rolling the roller by hand, carefully wind the sanding belt around the drum, making sure to keep it snug. The edges of the belt should meet without overlapping.
8. Squeeze the locking clamp on the right end of the drum and insert as much of the end of the sanding belt into the slot as possible.
9. Release the clamp to lock the belt in place.
10. Roll the roller by hand to ensure the belt is snug and the edges meet without overlapping.

FIG. 6

NOTE: The Dual Drum Sander is designed to achieve coarse and fine sanding in a single pass. Therefore, the coarser sanding belt should always be installed on the front roller with the finer belt on the rear roller.

TO ADJUST THE FEED BELT TRACKING

For proper stock feed, both sides of the feed belt must travel at exactly the same rate. If the feed belt tracks to the right or left during operation, you will need to adjust the tension.

NOTE: If the belt tracks to the left, tighten the left tensioning bolt. If it tracks to the right, tighten the right tensioning bolt.

1. Locate the feed belt tensioning bolts as shown in Fig. 7.
2. Turn the sander on and, depending on which direction the feed belt is tracking, use a 6mm Allen wrench to tighten either the left or right adjustment bolt in 1/4-turn increments until the feed belt tracks evenly.

FIG. 7

ADJUSTMENTS

TO ADJUST DRIVE BELT TENSION

1. Remove the elevation cursor by unscrewing the retaining screw.
2. Remove the eight Phillips head bolts and washers securing the left and right side guards (A) to the machine and remove the guards.
3. Use a 6mm Allen wrench to remove the four hex cap bolts and washers securing the bottom guard (B) to the machine. See Fig. 8.
4. Raise the telescoping panels high enough to expose the motor mount. See Fig. 8. Prop up using a scrap block of wood.
5. Locate the two M12 nuts (E) that raise and lower the motor. See Fig. 9.
6. To increase tension on the drive belts, loosen the bottom nuts then tighten the top nuts.
7. Drop the telescoping panels back into place and re-secure to the bottom guard.
8. Re-attach the side guards and elevation cursor.

Fig. 8

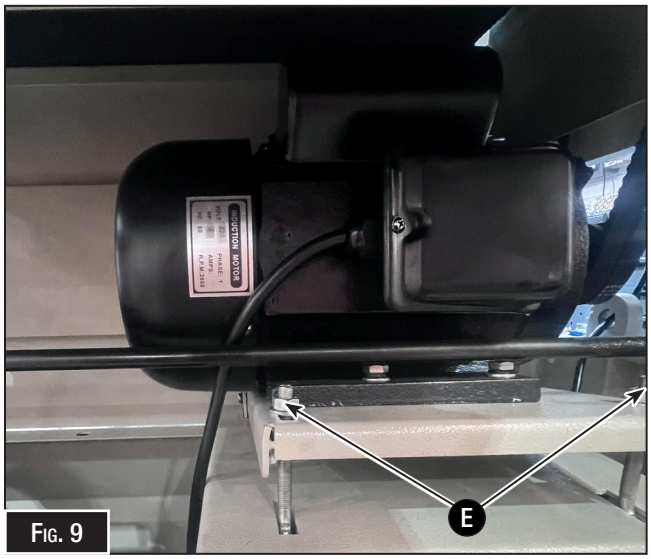


Fig. 9

WARNING!

The machine is the sole responsibility of the owner for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training, proper inspection and maintenance, manual availability and comprehension. The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

ADJUSTMENTS

TO REPLACE THE FEED BELT

⚠WARNING ***This step requires two adults. The feed table is heavy, be careful when disconnecting and removing it from the machine. Failure to comply may cause serious injury and/or damage to the sander and/or property!***

1. Using the table elevation crank and handle, lower the table as far as it will go.
2. Release tension on the feed belt by backing off the locking nuts (A) on the feed belt adjustment bolts (Fig. 10) and then tightening the feed belt adjustment bolts (B) until they are loose enough to remove the feed belt assembly.
3. Loosen but do not remove the eight Philips head screws (C) holding the bearings to either side of the front of the feed table. See Fig. 11.
4. Remove the front guard (D) by sliding it forward.
5. Locate and remove the four 6mm hex head screws (E) securing the feed table to the base. See Fig. 12.
6. With the aid of a second adult, carefully remove the feed table through the rear of the machine being careful to angle it away from the motor housing.
7. Position the feed table on its side and remove the worn feed belt.
8. Carefully slide the new feed belt into place.
9. Slide feed belt assembly back onto machine base through the rear, being careful not to damage motor housing.
10. Replace and tighten the four 6mm hex cap head screws to secure the feed table to the machine base.
11. Replace the front guard and re-tighten the Phillips head screws on each bearing.
12. Re-tension the feed belt.
13. Adjust the tracking as described on page 9.

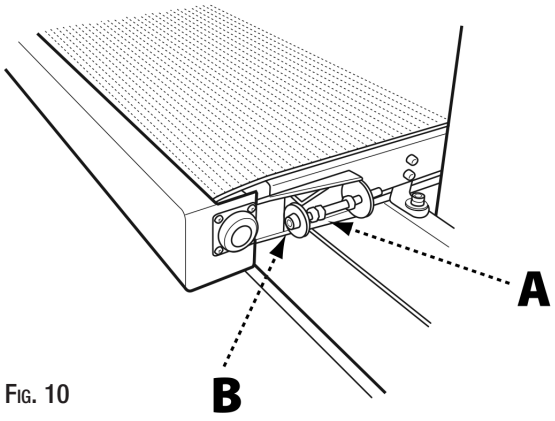


Fig. 10

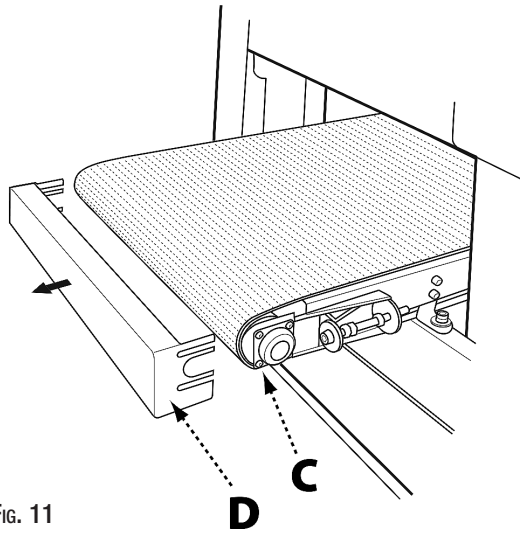


Fig. 11

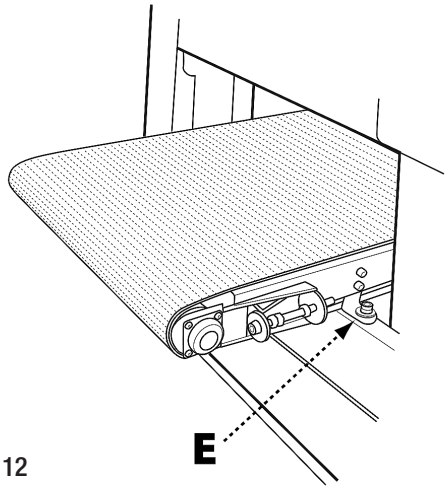
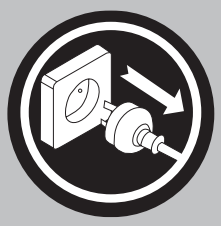


Fig. 12



WARNING!
Always disconnect the power to the machine before servicing or doing maintenance to the machine.

ADJUSTMENTS

TO ADJUST PARALLELISM OF SANDING DRUMS

The front sanding drum has been factory adjusted and needs no further adjustment. The rear sanding drum must be adjusted for parallelism.

1. Lift the upper guard up and tilt it toward the rear of the machine to expose the sanding drums.
2. Using the 6mm wrench, rotate the cap screws, indicated in Fig. 13, on either end of the rear drum.
3. Turning the cap screws clockwise will raise the drum while turning it counterclockwise will lower the drum.
4. Repeat this dial setting on the opposite end of the drum.
5. Replace the upper guard to its original position over the drums.

FIG. 13

NOTE: For proper operation of the machine, the dial settings at both ends of the drum must be identical.

TO ADJUST ROLLER PRESSURE

The pressure rollers maintain tension upon the workpiece as it passes through the machine. If the stock refuses to pass through the machine, or the finished surface is uneven, the tension on the pressure rollers may need adjusting.

1. Lift the upper guard up and tilt it toward the rear of the machine to expose the sanding drums.
2. Locate the roller pressure adjustment screws as indicated in Fig. 14.
3. Using a hex key, turn the screws clockwise to increase the roller pressure on the workpiece; or counterclockwise to decrease the pressure.
4. Adjust both sides of the pressure rollers to ensure parallelism with the drums.
5. Replace the upper guard to its original position over the drums.

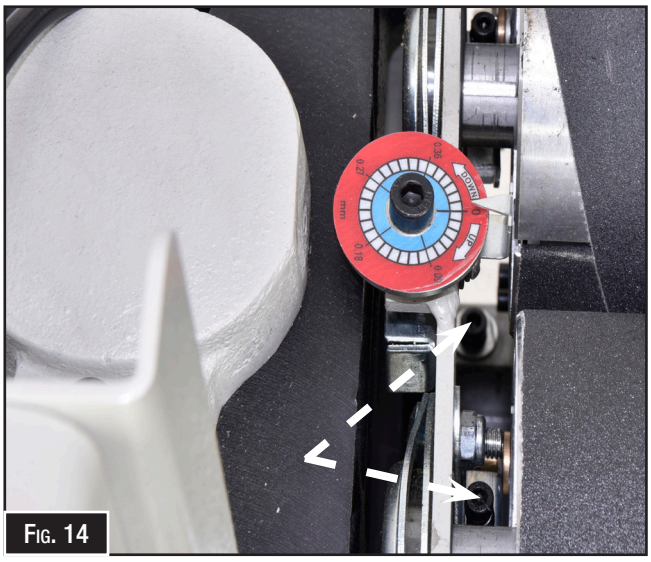


FIG. 14

ADJUSTMENTS

TO ADJUST DRUM HEIGHT

In order to accommodate different abrasive grits on the drums, the height of the drums from the workpiece must vary. The height of the front drum has been factory set and should not be adjusted. The back drum is designed for easy adjustment.

1. Lift the upper guard up and tilt it toward the rear of the machine to expose the sanding drums.
2. Locate the drum height adjustment screw as shown in Fig. 15.
3. Rotate the adjustment screw to the desired measurement.
4. Repeat this same adjustment at the opposite end of the roller to maintain parallel orientation to the front drum.
5. Replace the upper guard to its original position over the drums.

NOTE: For proper operation of the machine, the dial settings at both ends of the drum must be identical.
IMPORTANT: The chart at the right shows the proper settings based upon sanding grits.

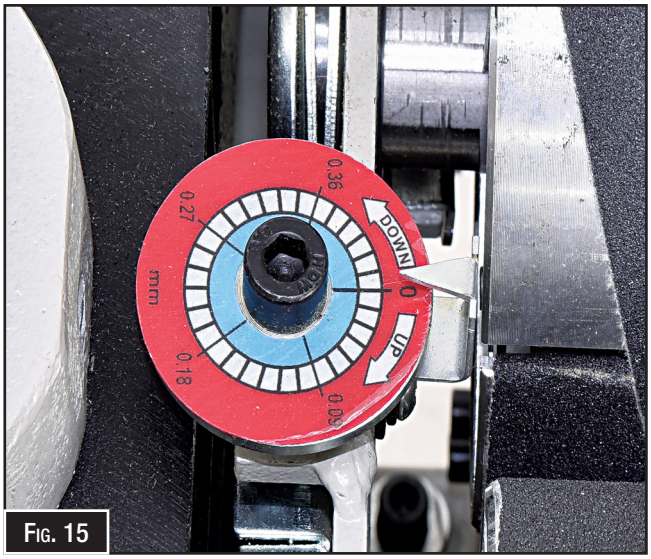


Fig. 15

Front Grit / Rear Grit	Setting (mm)
80 / 100, 120 / 150, 120 / 180, 150 / 220	**.15**
80 / 120, 100 / 150, 100 / 180	**.30**
60 / 100, 36 / 38	**.40**
36 / 120	**.56**
36 / 60,	**.76**
36 / 80	**.9**

OPERATION

The basic operating procedure for the Dual Drum Sander is as follows:
1. Establish the depth of wood removal and set table height.
2. Start drums.
3. Start feed belt and select proper feed rate.
4. Ensure dust collection system is running.
5. Feed stock through machine.

OPERATING TIPS

DETERMINING DEPTH OF WOOD REMOVAL

Given the variables of grit abrasion, wood type, and feed rate, determining proper depth of removal may take some experimentation. For best results, use scrap wood to practice sanding and to develop skill and familiarity with the machine before doing finish work. Also consider any cups and/or crowns in the workpiece. A good rule of thumb when sanding with grits finer than 80 is to lower the drum so it contacts the workpiece but drum can still be rotated by hand. For grits coarser than 80, lower the drum slightly more.

SANDING IMPERFECT STOCK

When sanding stock with a cup or crown, place the crown up. This will stabilize the stock to help prevent tipping or rocking during sanding. After the crown has been removed and the top is flat, turn the stock over and sand the opposite side. To avoid personal injury, take special care when sanding stock that is twisted, bowed, or otherwise varies in thickness from end to end. If possible, support such stock as it is being sanded o keep it from slipping or tipping. Use an extra roller stand, help from another person, or hand pressure on he stock to minimize potentially hazardous situations.

OPERATING TIPS

STOCK FEEDING ANGLE

Some pieces, because of their dimensions, will need to be fed into the machine at a 90-degree angle (perpendicular to the drums). However, even a slight offset angle of the stock will provide for more effective stock removal. The optimum feeding angle is about 60-degrees. Angling the workpiece for stock removal provides other advantages, such as less loading of certain areas of the drums due to glue lines or mineral streaks in the stock, more even wear of abrasive strips, potentially faster feed rates, and lighter loads on the motor. For the best final finish, however, the stock should be fed with the grain on the final one or two passes.

MULTIPLE-PIECE SANDING

When sanding multiple pieces simultaneously, make sure to stagger (step) the pieces across the width of the feed belt. Multiple pieces should also be of similar thickness and this helps to ensure consistent contact with the pressure rollers

SANDING FACE FRAMES AND RAISED PANEL DOORS

It is important to have the proper abrasive contact when doing this type of sanding. If the machine is set to take an excessive depth of cut, the result can be a gouge or dip as the drum goes from sanding the rails at full width to sanding just a few inches of width of the tiles.

EDGE SANDING

When edge sanding, the sander will mimic the opposite edge of the stock which is lying on the feed belt. Because of this, it is important for the stock edge to have been ripped at the proper angle to the face before the sanding process. When edge sanding small stock, clamp several pieces together to prevent them from slipping on the feed belt.

SELECTING THE PROPER ABRASIVES

The abrasive material you choose will have a substantial effect on the performance of your sander. Variations in paper type, weight, coating and durability all contribute to achieving your desired finish.
As with any sanding operation, first begin sanding with a coarser grit, depending on the roughness of the stock or the amount of stock to be removed. Then progressively work toward finer grits. This means if you are using two different grits on your DS-660 Dual Drum Sander, the coarser grit should always be placed on the front drum.

The amount of stock to be removed is a major consideration when initially choosing the grit grade. Grits 36 and 60 are primarily designed for stock removal; grits over 100 are primarily finishing grits designed to remove the scratch pattern from the previous grit used.

For best results, never skip more than one grit grade when progressing through a sanding sequence. For fine work, such as furniture, try not to skip any grit grades during the sanding process. In general, premium quality abrasives will produce a better finish with a less noticeable scratch pattern.

CAUTION: Grits that are too fine can sometimes burnish the wood and leave a glossy surface which will not accept stains evenly. This will vary by type of wood. Oak, for example, is susceptible to burnishing because of its open pores.

READY-TO-CUT ABRASIVE STRIPS

DESCRIPTION	NORMAL USE
60 Grit Sandpaper	surfacing and dimensioning boards, trueing warped boards
80 Grit Sandpaper	surfacing, light dimensioning, removing planer ripples
120 Grit Sandpaper	light surfacing, minimal stock removal
150 Grit Sandpaper	finish sanding, minimal stock removal
180 Grit Sandpaper	finish sanding only, not for stock removal
220 Grit Sandpaper	finish sanding only, not for stock removal.

⚠ WARNING!

SAFETY FIRST

Avoid breathing the dust from this machine by always wearing a dust mask when operating the machine. Breathing protection helps to protect the chest from problems that could occur.

DIGITAL DISPLAY

The M503L digital counter is a magnetic scale digital readout (DRO) and measurement system primarily used for woodworking and industrial positioning.

KEY DESCRIPTION (Fig. 16)

Exit Key: Clears the display or exits the current mode

Parameter Changing Key: Changes the current display parameters

Menu/Parameter Switching Key: Switches between Menu's or parameters when they are selected.

Menu/Confirmation Key: Long press enters the menu, a short press is the parameter confirmation function

Back Light Key: Switches on the display back light.

Fig. 16

NOTE: The Digital Display parameters were set before the machine left the factory and the only changes need maybe to ZERO the display or enter a value.

WARNING!

Always check the capacity of the machine. Exceeding the capacity of the machine may result in sudden breakage that ejects dangerous metal debris at the operator or bystanders.

WARNING!

Before operating any machine, take time to read and understand all safety signs and symbols. If not understood seek explanation from trade magazines or an experienced operator.

RECOMMENDED MAINTENANCE PROCEDURES

ROUTINE INSPECTION

It is recommended that you periodically inspect your Dual Drum Sander as a precautionary action.
During this time, check all hardware such as bolts, nuts and screws to ensure they are properly tightened. Also verify that the sanding belts and drive belts are mounted properly and have not become loose or torn. Also take this opportunity to inspect for dust and/or wood particles that may have accumulated on or in the machine.

LUBRICATION (Fig. 17)

The table height adjustment screw shafts, located at either end of the machine must be well lubricated with grease at all times. In order to access, inspect and lubricate the screw shafts, it is necessary to remove the two side guards located on either end of the machine.

To remove the side guards:

1. Remove the elevation cursor by unscrewing the retaining screw.
2. Remove the eight Phillips head bolts and washers securing the left and right side guards to the machine and remove the guards.
3. Re-attach side guards and elevation cursor.

CLEANING THE SANDING BELTS

Regularly clean the sanding belts on the drums with commercially available cleaning sticks, following the manufacturer's directions. When cleaning, also brush the stick crumbs from the sanding drum while it is still rotating.

FIG. 17

TROUBLESHOOTING

Problem	Potential Cause	Solution
Sanding surface clogs too quickly.	Sanding grit too fine. Too much material being removed at once. Dirty board surface. Insufficient dust collection. Board contains too much moisture. Worn sanding belt.	Change to a coarser grit. Adjust table height. Ensure board is free of debris prior to sanding. Inspect dust collection system. Properly dry stock before sanding. Replace sanding belt (Page 8)
Sanding belt tears.	Drums not parallel to feed table. Sandpaper edges overlapped. Tape is slipping. Too much material is removed at once.	Re-align drums (Page 10) Re-install sanding belt. Rewind the loose belt on the drum. Lower the table height.
Rounding on the edges.	Too much material is removed at once.	Lower the table height.
Uneven thickness on right and left side of the boar	Drums are not parallel to feed table. Uneven wear of sanding paper.	Re-align drums (Page 10) Replace sanding belt.
Stock slips on the feed belt.	Too much material is removed at once. Too much dust on the feed belt surface. Worn feed belt.	Lower the table height. Clean surface with air hose. Replace feed belt (Page 8)
Shiny spots on sanded surface.	Sanding paper too old. Drums too high.	Replace sanding belt (Page 8) Lower table height.
Marks on sanded surface	Partial damage to sanding paper. Paper overlapped on edges.	Replace sanding belt (Page 8) Re-align sanding belt on drum
Feed belt does not run smoothly or stops completely.	Feed belt tension is incorrect. Belt tracking is incorrect.	Adjust feed belt tension (Page 8) Adjust feed tracking (Page 8)
Consistently noticeable "snipe"	No out-feed support. Pressure roller spring tension incorrect. Drum height incorrect in relation to pressure rollers.	Use supplementary support in rear of machine. Check and adjust. Adjust pressure rollers (Page 11)

TWIN DRUM SANDER
DS-660

Order Code: (L1296)

Edition : 2.0
Date: (02/26)

The following section covers the spare parts diagrams and lists that were current at the time this manual was originally printed. Due to continuous improvements of the machine, changes may be made at anytime without notification.

HOW TO ORDER SPARE PARTS

1. Have your machines model number, serial number & date of manufacture on hand, these can be found on the specification plate mounted on the machine.
2. A scanned copy of your parts list/diagram with required spare part/s identified.

NOTE: SOME PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

3. Go to **www.machineryhouse.com.au/contactus** and fill out the inquiry form attaching a copy of scanned parts list.

WARNING!
Electricity is dangerous and could cause death
All electrical work must be carried out by a qualified electrician.

CAUTION!
It is impossible to cover all possible hazards Every workshop environment is different. These are designed as a guide to be used to compliment training and as a reminder to users prior to equipment use. Always consider safety first, as it applies to the individual working conditions.

TABLE PARTS DIAGRAM

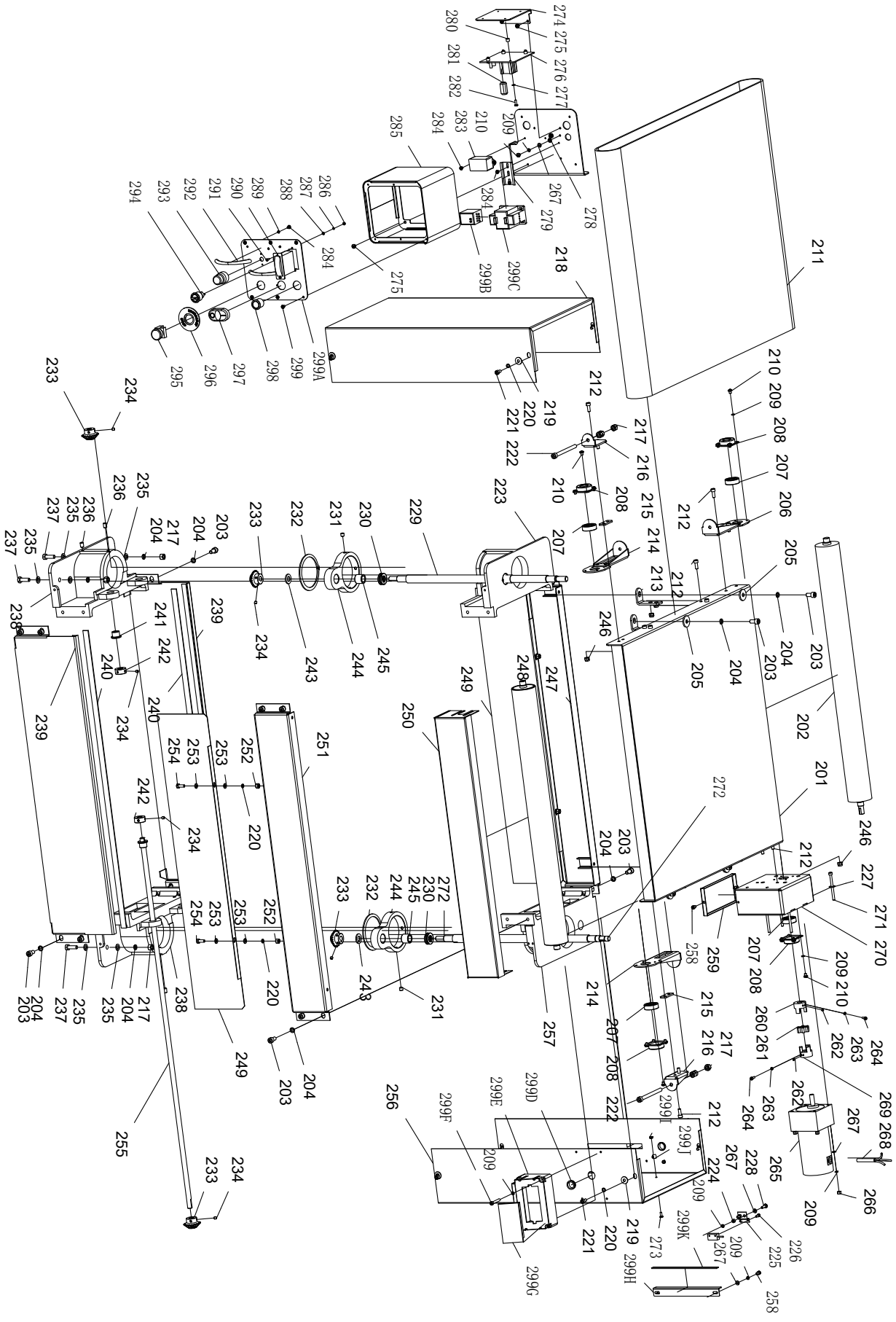
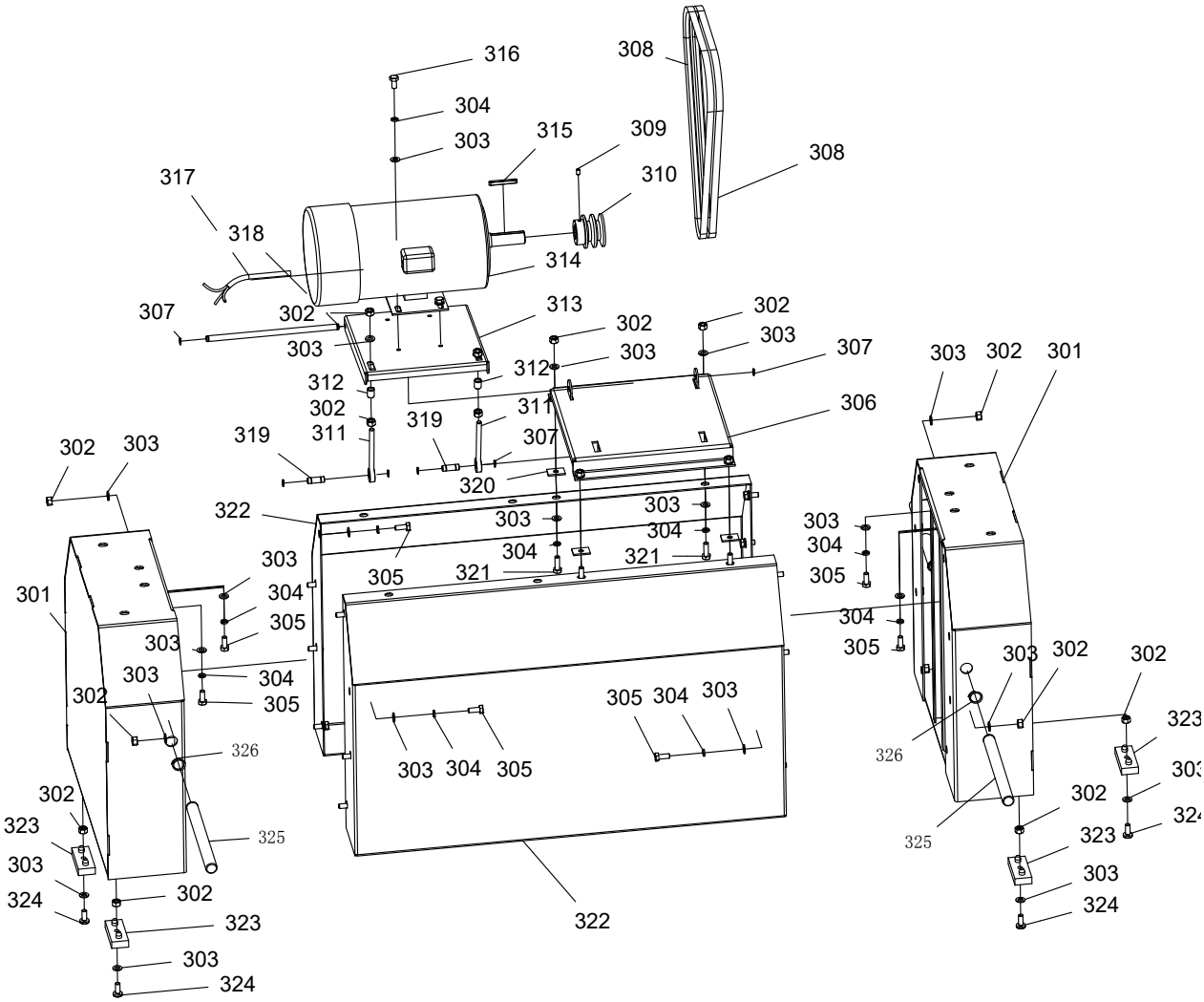


TABLE PARTS LIST

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
201	BELT PLATEN	1	256	RIGHT COVER	1
202	CONVEYOR DRIVE ROLLER	1	257	RIGHT COLUMN BRACKET	1
203	CAP SCREW M8*16	20	258	CAP SCREW M5*8	4
204	LOCK WASHER 8	24	259	BOTTOM COVER	1
205	FLAT WASHER 8*28*3	4	260	SHAFT JOINT Ø12	1
206	POSITIONING PLATE	1	261	RUBBER WASHER JOINT	1
207	BEARING 6202	4	262	SET SCREW M4*8	2
208	BEARING CAP	4	263	LOCK WASHER 4	2
209	LOCK WASHER 5	22	264	CAP SCREW M4*12	2
210	PHI HEAD SCREW M5*8	18	265	SPEED REDUCTION MOTOR	1
211	CONVEYOR BELT	1	266	HEX NUT M5	4
212	CAP SCREW M6*16	18	267	FLAT WASHER 5	10
213	MOUNTING BRACKET	4	268	SPEED MOTOR CORD	1
214	ADJUST MOUNTING BRACKET	2	269	SHAFT JOINT Ø10	1
215	PAD	2	270	ELECTRIC CONTROL BOX	1
216	MICRO-ADJUSTMENT BLOCK	2	271	CAP SCREW M5*65	4
217	HEX NUT M8	10	272	LEAD SCREW RIGHT	1
218	LEFT COVER	1	273	BUTTON HEAD SCREW M4*8	3
219	ENLARGE WASHER 6	8	274	PLATE	1
220	LOCK WASHER	12	275	PHI HEAD SCREW M5*6	6
221	CAP SCREW M6*12	8	276	PC BOARD	1
222	CAP SCREW M8*100	2	277	FLAT WASHER 4(ABS)	4
223	LEFT COLUMN BRACKET	1	278	SERRATED SPACER 5	2
224	SPACER	2	279	RAIL	1
225	PLATE	1	280	SPACER WASHER	4
226	CAP SCREW M4*10	2	281	SHIELDED MAGNETIC RING	1
227	ENLARGE WASHER 5	4	282	PHI HEAD SCREW M4*12	4
228	PHI HEAD SCREW M5*16	2	283	NOTCH FILTERS	1
229	LEAD SCREW	1	284	PHI HEAD SCREW M4*6	8
230	BEARING 51102	2	285	SWITCH BOX	1
231	SET SCREW M8*8	4	286	HEX NUT M3	2
232	EXT RET RING 80	2	287	LOCK WASHER 3	2
233	BEVEL GEAR	4	288	FLAT WASHER 3	2
234	SET SCREW M6*6	12	289	LOCK WASHER 4	4
235	FLAT WASHER 8	8	290	LOADING GAUGE	1
236	SET SCREW M8*12	4	291	PHI HEAD SCREW M3*10	2
237	HEX BOLT M8*25	4	292	PROTECTION HANDLE	2
238	LOWER BRACKET	2	293	REGULATOR KNOB	1
239	COVER	2	294	CONVEYOR SWITCH	1
240	DAMPING BAR	2	295	EMERGENCY STOP BUTTON	1
241	GEAR SHAFT BUSHING	2	296	EMERGENCY STOP LABEL	1
242	POSITIONING COLLAR	2	297	ON/OFF BUTTON	1
243	FLAT WASHER 12.5*22*0.8	2	298	POWER LAMP	1
244	SCREW HOLDER	2	299	PHI HEAD SCREW M4*8	6
245	BRONZE COLLAR COVER	2	299A	SWITCH PANEL	1
246	LOCK NUT M6	18	299B	THERMAL PROTECTOR	1
247	REAR PANEL	1	299C	CONTACTOR	1
248	FRONT CONVEYOR ROLLER	1	299D	PLASTIC GROMMET 20	2
249	SHIELD PLATE	2	299E	BOX	1
250	COVER PANEL	1	299F	CAP SCREW M5*35	4
251	FRONT PANEL	1	299G	MAGNETOSCALE TRANSDUCER	1
252	HEX NUT M6	4	299H	FIXED PLATE	1
253	FLAT WASHER 6	8	299I	HEX NUT M4	3
254	HEX BOLT M6*16	4	299J	CLAMP	3
255	TRANSMISSION SHAFT	1	299K	MAGNET	1

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

CABINET & MOTOR PARTS DIAGRAM

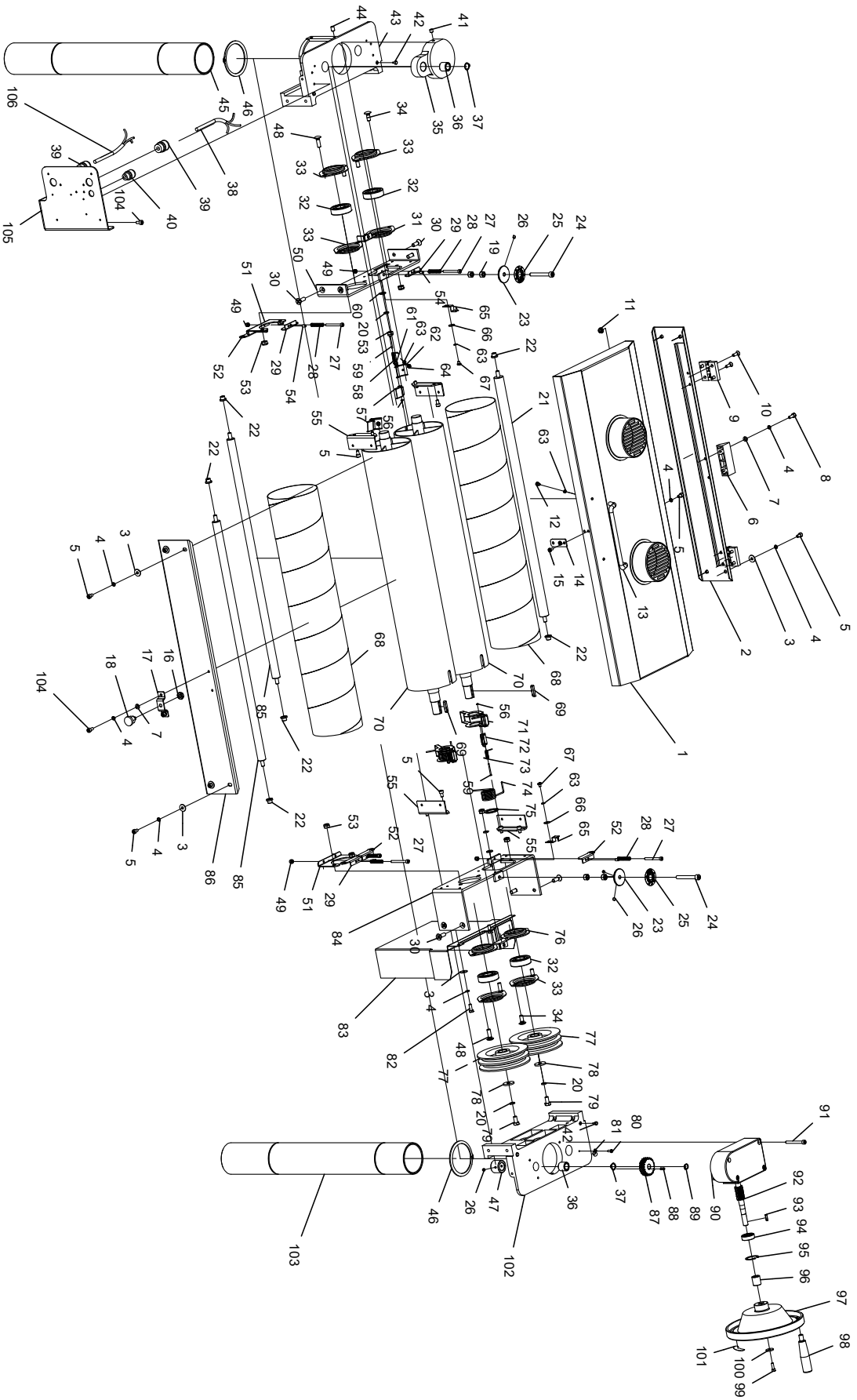


CABINET & MOTOR PARTS LIST

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
301	SIDE PANEL	2	314	MOTOR 3HP	1
302	HEX NUT M8	28	315	KEY C6*40	1
303	FLAT WASHER 8	54	316	HEX BOLT M8*16	4
304	LOCK WASHER 8	28	317	MOTOR CORD	1
305	HEX BOLT M8*20	20	318	BASE SHAFT	1
306	MOTOR BASE	1	319	POSITIONING SHAFT	2
307	EXT RETAINING RING 10	6	320	RUBBER WASHER	4
308	BELT XPA1250	2	321	HEX BOLT M8*25	4
309	SET SCREW M6*10	1	322	MIDDLE PANEL	2
310	MOTOR PULLEY	1	323	FOOT PAD	4
311	ADJUST BOLT	2	324	PHI HEAD SCREW M8*20	4
312	BUSHING	2	325	GRANE POST	4
313	MOTOR ADJUSTMENT PLATE	1	326	EXT RET RING 20	4

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

DRUM PARTS DIAGRAM



DRUM PARTS LIST

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
1	DRUMS COVER	1	55	CORNER BRACKET	4
2	DUST HOOD SUPPORT PANEL	1	56	LOCKING CLAMP 2.4	8
3	ENLARGE WASHER 6	10	57	FIXED CLAMP PLATE	2
4	LOCK WASHER 6	16	58	SPRING	2
5	CAP SCREW M6*10	18	59	SHAFT	4
6	FENCE GUIDE BLOCK	1	60	FLAT WASHER 8	2
7	FLAT WASHER 6	4	61	FLAT HEAD SCREW M5*10	2
8	CAP SCREW M6*16	2	62	FIXED CLAMP BRACKET	2
9	HINGE	2	63	LOCK WASHER 5	6
10	FLAT HEAD SCREW M6*20	8	64	HEX NUT M5	2
11	FLANGE NUT M6	4	65	SCALE POINTER	2
12	CAP SCREW M5*8	2	66	ENLARGE WASHER 5	2
13	DRUMS COVER HANDLE	1	67	PHI HEAD SCREW M5*8	2
14	LOCKING PLATE	1	68	SANDING BELT P120	2
15	BOTTOM HEAD SCREW M5*10	2	69	KEY A6*30	2
16	THIN NUT M10	1	70	DRUM	2
17	LATCH PLATE	1	71	TWO-STEP CLAMP	2
18	LATCH	1	72	TWO-STEP CLAMP PLATE	2
19	HEX NUT M8	4	73	SPRING	2
20	LOCK WASHER 8	4	74	SPRING	2
21	PRESSURE ROLLER REAR	1	75	EXT RET RING 28	4
22	BEARING	6	76	RIGHT ADJUST.BEARING CAP	1
23	ADJUSTING COLLAR	2	77	DRIVE ROLLER	2
24	CAP SCREW M8*65	2	78	FLAT WASHER 8*28*3	2
25	INDICATOR DIAL	2	79	HEX BOLT M8*16(LEFT)	2
26	SET SCREW M6*6	6	80	PHI HEAD SCREW M4*10	1
27	CAP SCREW M5*50	6	81	CLAMP	1
28	MICRO-ADJUSTMENT SPRING	6	82	HEX BOLT M6*16	2
29	LEFT CLAMP	3	83	PULLEY GUARD	1
30	FLAT HEAD SCREW M8*25	8	84	RIGHT BEARING HOUSING	1
31	LEFT ADJUST. BEARING CAP	1	85	PRESSURE ROLLER FRONT	2
32	BEARING 6205	4	86	FRONT UPPER PANEL	1
33	BEARING CAP	6	87	GEAR	1
34	CARRIAGE BOLT M8*20	4	88	KEY 4*12	1
35	POST COVER	1	89	EXT RET RING 12	1
36	BRONZE COLLAR COVER	2	90	WORM HOUSING	1
37	EXT RET RING 15	2	91	9CAP SCREW M6*55	4
38	POWER CORD	1	92	WORM GEAR	1
39	STRAIN RELIEF M20*1.5	2	93	KEY 4*16	1
40	STRAIN RELIEF M16	1	94	BEARING 6201	1
41	SET SCREW M8*8	2	95	INT RET RING 32	1
42	RUBBER WASHER	4	96	COLLAR	1
43	COLUMN SUPPORT BRACKET	1	97	9HANDWHEEL	1
44	SET SCREW M8*12	4	98	HANDLE	1
45	COLUMN	1	99	CAP SCREW M5*16	1
46	EXT RET RING 80	2	100	WASHER	1
47	STOP COLLAR	1	101	UP DOWN LABLE	1
48	CARRIAGE BOLT M8*25	4	102	COLUMN SUPPORT BRACKET RIGHT	1
49	LOCK NUT M5	6	103	COLUMN RIGHT	1
50	LEFT BEARING HOUSING	1	104	CAP SCREW M6*12	4
51	CLAMP BLOCK	2	105	SWITCH MOUNTING PLATE	1
52	RIGHT CLAMP	3	106	CORD	1
53	LOCK NUT M8	8			
54	SET SCREW M5*10	6			

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

NOTES:

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

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