



Twister T2 Trimming Machine

Owners Manual

English : Français : Español



Twister T2

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English - Français - Español

This Twister Owners Manual is divided into the following languages:

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The manual cover features a photograph of the Twister T2 Trimming Machine, a stainless steel unit on wheels with a hopper and a control panel. The background of the cover is green with faint images of machine components like the 'TUMBLER' and 'BLADES'.





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WARNING!
ONLY PROCESS PLANT MATTER.
FAILURE TO COMPLY
MAY RESULT IN
EQUIPMENT
DAMAGE AND/OR
BODILY HARM.
WEAR EYE
PROTECTION.

DANGER
TO REDUCE THE
RISK OF INJURY,
USERS MUST READ
AND UNDERSTAND
THE INSTRUCTION
MANUAL. KEEP
HANDS AND BODY
AWAY FROM MOVING
PARTS.



Important Notice



The Twister is intended for use on legal aromatic herbs and hops. Please check all municipal, provincial/state, and federal laws and regulations before using the Twister machine. Keirton Manufacturing Ltd. does not promote or condone the use of the Twister machine in any way that may be deemed illegal.

Allow only persons who understand this manual to operate the Twister machine.

To receive maximum performance and satisfaction from the Twister machine, it is important that you read and understand the safety and maintenance precautions before using the machine. This document refers to the Twister leaf trimming machine as Twister machine, machine or unit.

Warning



Because this machine is a high speed cutting unit, some special safety precautions must be observed to reduce the risk of personal injury. Careless or improper use may cause serious or even fatal injury.

Do not lend or rent your machine without the instruction manual. A first time operator should obtain practical instruction before using the machine.

READ THESE INSTRUCTIONS

Read all instructions completely before unit is operated.

KEEP THESE INSTRUCTIONS

Retain instructions for future reference.

HEED ALL WARNINGS

All warnings on the unit and in the instructions should be adhered to.

FOLLOW ALL INSTRUCTIONS

Follow all instructions completely before unit is operated.

**Warning**

To reduce the risk of fire or electric shock, do not expose this unit to water while plugged in.

Machine must be used with a properly grounded receptacle.

Refer to the machine labeling to determine correct electrical requirements. Ensure sufficient cable is used to power the machine.

Observe all applicable building and electrical codes.

Do not overload outlets or extension cords as this can result in fire or electric shock.

Maximum cord length should not exceed 50ft/15m. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

The machine must be unplugged before any protective covers can be removed.

Do not attempt to service electrical components on this unit yourself, as opening or removing covers may expose you to dangerous voltage and possible fire or electric shock.

Make certain all protective covers are installed and hands are clear before plugging in the machine.

Turn off and unplug machine before cleaning.





Warning

Never put objects into the tumbler that cannot be processed by the unit. Hard metallic objects that the operator does not notice can cause extensive damage and/or bodily harm.

Never plug in the unit with protective shrouds removed.

For safe use of your machine, DO NOT change or modify any part of the machine or accessories.

Never let the machine run unattended.

Do not attempt service that is not covered in this manual yourself as doing so may expose you to dangerous voltage or other hazards.

Damage requiring service must be referred to qualified service personnel. If unit does not operate normally by following operating instructions, adjust only those controls that are covered in the instructions. Improper adjustment may result in damage and may require extensive work by qualified service personnel to restore the unit back to its normal operation.

Replacement parts must be specific to this unit and supplied by the manufacturer. Unauthorized substitutions may result in fire, shock or bodily harm.

After completion of any service work, ask to ensure safety checks were performed to determine the unit is in proper operating condition.

Keep unit well ventilated to prevent overheating.



Warning

Careless or improper use of this unit may cause serious or fatal injury.

To reduce the risk of injury, keep body parts away from fast moving parts.

To reduce risk of injury, do not wear loose clothing or jewellery when operating the machine. Sleeves should be rolled past the elbows and long hair confined. Do not wear gloves.

To reduce risk of injury, safety glasses must be worn.





Warning

DO NOT operate unit with protective covers removed.

Replace the warning labels if they become obscured or removed.

Do not operate the machine while tired or under the influence of drugs, alcohol or other medication.

Keep visitors a safe distance from work area. Keep children away!

Do not reach inside tumbler while machine is plugged in.

Do not allow lubricants or mineral oils to collect on the ground around the machine. This could cause a slipping hazard for the operator and others.

Engineering Improvements

Keirton Manufacturing Ltd. is continually looking to improve all of its products. As a result, engineering changes and improvements are sometimes made. If operation or appearances differ from this manual, please contact your dealer for assistance

Operation

It cannot be overstated that the Twister is a precision machine. It is essential that it is operated and cared for with this in mind.

The Twister machine has been adjusted and tested by the manufacturer. However, at initial startup and at the beginning of each day, check to ensure the blades spin freely before plugging in the unit.

To do this, the operator must gain access to the blades. This is a very quick and straightforward task. It is not absolutely necessary to remove the tumbler, however it is recommended to get a good visual of the blades.

Removing the tumbler



Warning

The following should only be done when it is certain the power has been disconnected.

Start by locating the tumbler guide. Remove the pin and swing the guide open.



Figure 1.1 Tumbler guide closed



Figure 1.2 Tumbler guide open



Figure 1.3 Easy release handle

Now, locate the easy release handle below the tumbler guide near the bottom of the unit.

Turn the handle counterclockwise to release. Now squeeze the tumbler belt together directly below the tumbler.

Simultaneously re-tighten the easy release handle. This effectively takes the tension off the belt so that it can be removed.

With the belt removed, the tumbler can now be pulled out of the unit.

Be **VERY CAREFUL** when removing the tumbler. This is a very precise component of the machine and if dropped or damaged, the machine's performance will be greatly reduced, or possibly completely disabled.

With the tumbler removed, the next step is to remove the protective covers.





Warning

Removing Protective Covers

To access the helix blades, unlatch (latches labelled 1 and 2 in figure 1.4) the top protective cover and remove by pulling towards you while lifting simultaneously.

WARNING! The following should only be done when it is certain the power has been disconnected.



Figure 1.4 Latches 1 and 2

To remove the lower cover, ensure the suction hose is not connected to the discharge outlet.

Place your hands in the approximate location where the latches from the top cover were located. With even pressure, lift straight up and begin to rotate towards the nylon brush.

This now completely exposes the helix blades.



Figure 1.5 Covers Removed

Checking the blades



Warning

The following should only be done when it is certain the power has been disconnected. And NEVER slide your fingers down the edges of the blades lengthwise.

With the protective covers removed, visually check for damage to the helix blades by slowly spinning the blades by hand. Now ensure the bed knife is free of damage.



Figure 1.6 Blades

Ensure the blades spin freely. Light contact against the bed knife is normal on a properly adjusted unit. Due to the design and precision adjustment, the blades receive a continual-self sharpening action. Light contact is necessary to maintain a sharp cutting edge. No contact will cause the blades to become dull. The full adjustment procedure is in the Adjustment section of this manual.



Note: If there is damage to the blades that will not allow smooth operation, the unit will need to be serviced.

Damage to the blade is very rare on a properly adjusted unit. Typically rocks, hard metallic objects or poor adjustment is the cause of damaged blades. These circumstances are not covered under warranty. New parts must be purchased and installed.

Lubrication

Before re-assembly of the machine, it is recommended a Twister Lube or non-stick cooking spray be applied to several parts of the unit. Depending on the material being processed, this serves two purposes: it will limit buildup of material on areas in constant contact, as well as allow for easy cleaning. The machine is designed to run without lubricant; however, constant cleaning may be required to remove leaf buildup.

The following is a list of Approved products and what components should be coated.

Nylon Brush	Twister Lube/Non-stick cooking spray
Knife-bar	Twister Lube/Non-stick cooking spray
Helix blades	Twister Lube/Non-stick cooking spray
Top protective cover (Inside)	Twister Lube/Non-stick cooking spray
Bottom protective cover (Inside)	Twister Lube/Non-stick cooking spray



Note: The nylon brush may turn a yellowish/green color from the non-stick cooking spray; this is normal. It has been demonstrated that liberal use of the lubricants on the specified areas greatly improves overall production and cleaning time of high residue products.



Figure 1.7 Grease Fittings

Grease

There are 2 grease fittings that must be greased every 50hrs with food-grade grease. They are located on either end of the machine in the blade bearing housing. The belt cover must be removed to access one of them. See Figure 1.7 for the location of each fitting.





Figure 1.8 Completely Disassembled

Once lubrication is complete, the machine is ready for re-assembly.

Follow the disassemble procedure in the reverse order. When reinstalling the tumbler belt, allow the weight of the motor to provide the necessary tension. Make sure to re-tighten the easy release handle.

Powering up!



Warning

Ensure the cord is a maximum length of 50ft/15m. Do not overload electrical outlets. Failure to comply could result in fire or electric shock. It is recommended this unit is connected to a dedicated circuit. Consult a local electrical contractor for assistance.

Once the tumbler has been reinstalled, test to make sure it spins freely. 2-3 spins by hand is sufficient.

Position the vacuum and connect the hose between the discharge of the machine and the inlet of the vacuum.

Connect the cord that was supplied or one that meets the recommended specifications of this manual. On a separate circuit, plug in the vacuum.



Figure 1.9 Power connection and Switches

Ensure hands and objects are clear of the machine and proceed to begin startup.

Turn on the switch labelled Blades (Figure 1.9) to engage the blades.

Turn on the switch labelled Tumbler (Figure 1.9) to engage the tumbler.



Turn on the vacuum.

Note: Keep in mind, the machine will have specific operating characteristics and noise qualities. The operator should become familiar with the machine and listen for abnormal changes. Concerns should be investigated before considerable problems occur.

The operator can now proceed to feed the material being processed into the hopper.



Due to the different compositions of the materials being processed, lubricating and cleaning frequency will vary. Most operators will realize these needs and adjust accordingly. Ask your dealer for practical lubricating and cleaning frequency of your specific industry. The manufacturer recommends cleaning at the end of each day or the beginning of the next. Buildup is the most obvious sign that there is need for more attention in this area.

Adjustments

There are very few adjustments that will need to be made on the machine. The Twister is shipped from the manufacturer adjusted and tested. Due to the precision of this machine, it is crucial all adjustments are performed by a competent person.



Warning

The following should only be done when it is certain the power has been disconnected. And NEVER slide your fingers down the edges of the blades lengthwise.

Blade adjustment

The dual clicker adjustment arrangement integrated in the unit allows for a very simple and quick adjustment procedure. The precision of this design provides the essential control in providing a continual self-sharpening system.

Removal of the tumbler and protective covers is vital in blade adjustment. The blades must be completely clean before proceeding. Locate the two adjustment clickers on the switch side of the unit.

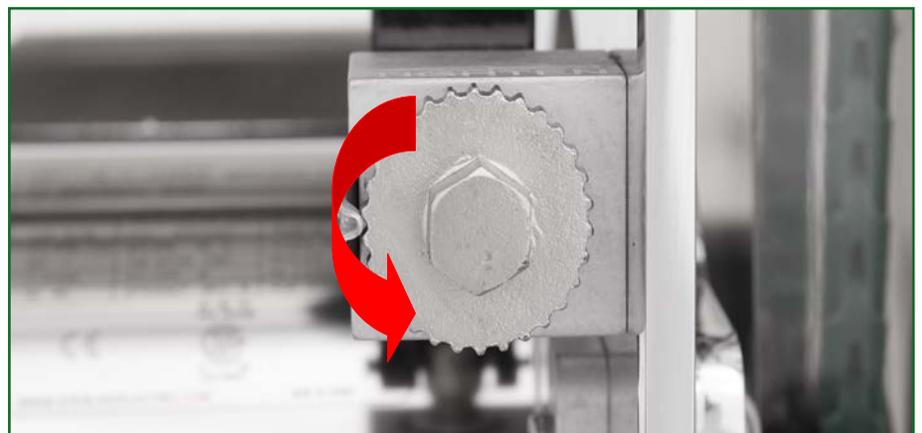


Figure 2.0 Blade adjustment clickers



Note: Adjustment clicks correspond to .0007inch (.018mm) bed knife movement.

Slowly turn the adjustment clicker clockwise to increase the space between the helix blade and the bed knife to allow the thickness of a piece of paper. Repeat on the opposite side. The helix blade should now spin freely with zero contact on the bed knife.

Choose a side to start on and insert a piece of newspaper between the helix blade and the bed knife by slowly rotating the blade forward. Turn the clicker counterclockwise (on same end of blade) one click at a time. Continue until the paper is pinched lightly, when inserted from the front, parallel to bed knife. A slight drag will be felt as the paper is pulled.

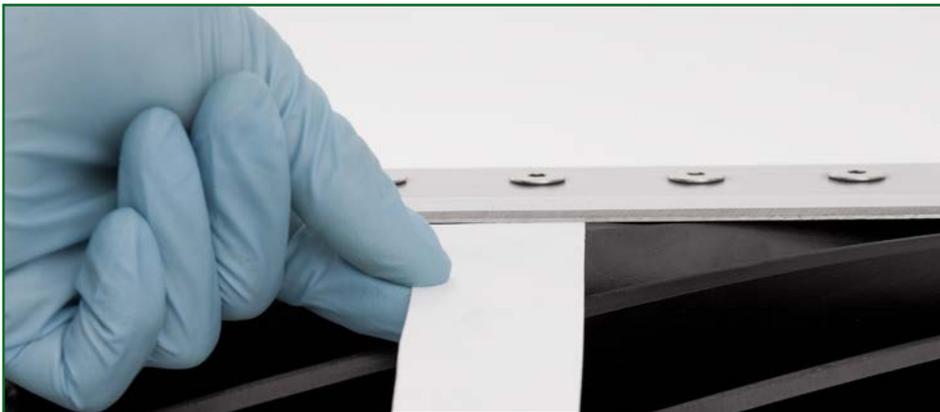


Figure 2.1 Paper inserted from the front

Check for light contact at other end of the helix blade using paper and adjust as required. After adjustment is accomplished, check to see if the helix blade can pinch paper when inserted from the front.

Now insert paper at a right angle to the bed knife and rotate the blades to cut paper strips to check blade sharpness. It should be possible to cut paper with minimum contact between the bed knife and the helix blades.

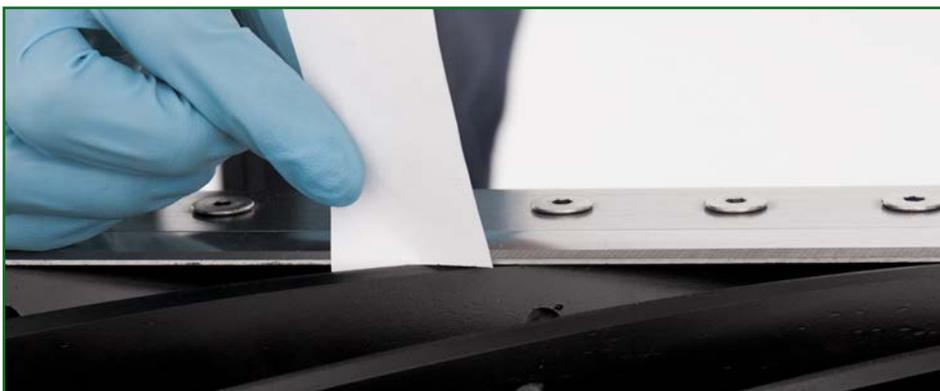


Figure 2.2 Paper inserted from the top



Any damage to the blades may make proper adjustment impossible. Damage will not be corrected by the self-sharpening feature. Damage must be repaired by an authorized service location.

Once adjustment has been completed, ensure the helix blade spins freely. There should be a very minimal sound of contact with a slight drag. If the blades do not spin freely, re-do the adjustment procedure and ensure the blades and under the bed knife are clean.

Replace the protective covers and tumbler. Proceed to initiate the startup procedure. A high pitch extremely fast ticking sound should be present. This is a good indication of a properly adjusted blade assembly.

Tumbler Adjustment

Tumbler adjustment has been set and tested at the factory. Improper adjustment will lead to damage of the tumbler assembly and scratches in the Teflon coating.



Warning

The following should only be done when it is certain the power has been disconnected.

Factory adjustment has the tumbler set for the closest cut possible. If the operator chooses to lengthen the cut due to certain product criteria the easy procedure is as follows.

A 7/32 hex key and a 5/8 wrench are required.

Both ends of the unit will require the same procedure to make the tumbler level for an even cut.

Refer to Figure 2.3 (page 18)

Begin by loosening the hex bolts labelled 1-4. Next, loosen the locknut labelled 6.

Turn adjustment bolt labelled 5 clockwise to lower the tumbler and counterclockwise to raise the tumbler. Once you reach the desired height, re-tighten in the reverse order.

Always make your final adjustment of #5 by raising the tumbler. This will ensure it stays locked in the set position.

Proceed to the opposite side of the machine.





Note: Make sure to test that the tumbler spins freely by hand before applying power.

Too close of an adjustment can cause damage to the tumbler.

Also, remember the vacuum has very powerful suction; it can pull very minuscule amounts on the tumbler causing it to rub.



Note: Ensure all loosened nuts and bolts are tight before re-powering machine.

Note: Ensure everything spins freely before re-powering machine.

Note: Ensure the last adjustment to #5 is in the counterclockwise direction.



Figure 2.3 Tumbler adjustment and belt replacement



Belt Replacement

The blade drive belt has been tested to last a very long time. However, if for some reason the belt is lost, follow this procedure.

Remove the hex bolts labelled 7 in figure 2.3. Then loosen the bolts 8 through 11 in figure 2.3. Now lift the motor and remove belt. Due to its weight, two persons may be required to remove the motor. Reverse this procedure to install a new belt.

Transport

If transporting or moving your machine is necessary, the following tips may be helpful.

Doors and tight spaces

The unit was designed to fit through standard doors; however, in some situations the width may become a problem. To help overcome this issue, the wheels can be removed very quickly by pulling the cotter pin on one side and sliding the axles out.

Tie down

With a chassis similar to a race car, the machine becomes very easy to move and tie down. There are several locations to connect straps and tie downs when in transport. Ensure the machine is sufficiently secure or damage could result.

Storage

The design and materials of the unit make storage very simple. And because there are very few corrodible parts, it can be stored virtually anywhere. With that said, there are a few tips to ensure you get the most out of the machine for a very long time. It is a good idea to make sure there is an even coating of WD-40 on the bed knife and helix blades.

This is especially important if the machine is going to be stored for extended periods without cleaning. The buildup of material from previous use will harden, making startup difficult. Following these steps will ensure smooth startup on the following use.

Store the machine in a safe dry place. Keep it out of reach of children and other unauthorized persons.

General Maintenance

Depending on the materials being processed the machine will require different maintenance schedules. For the purpose of this manual, it will be assumed the machine will be put through tough processing conditions.



Warning

The following should only be done when it is certain the power has been disconnected.

Lubrication

The machine should be lubricated with Twister Lube or non-stick cooking spray every hour.

Grease

The blade bearings must be greased every 50 hrs of use. See Figure 1.7.

Adjustment

The machine should be checked for possible damage to blades once a day. Adjustments can be made as required. See the Adjustment section of this manual for details.



Note: Any damage to the blades may make proper adjustment impossible. Operating the machine with damaged blades could result in further damage or personal injury. Damage will not be corrected by the self-sharpening feature. Damage must be repaired by an authorized service location or the manufacturer.

Cleaning

A thorough cleaning of the machine, including blades, should be done on a daily basis. Buildup can cause lack of performance, overheating and hard startup on future use. Future cleaning also becomes more difficult if the leaf buildup is given a chance to dry out and harden. Never slide your fingers down the edge of the blades lengthwise. See the Cleaning section of this manual for details.

Vacuum maintenance

Change bottom debris bag daily on the vacuum. Clean the top filter using a vacuum once a day for maximum performance. This filter is the key to powerful suction. Replacing this filter when air flow seems diminished will keep performance of the entire system at its fullest. Heavily used vacuums will require cleaning around the impeller. Be sure to disconnect the vacuum from its power source before removing the inlet cover. See your dealer for the proper replacement filter.



Cleaning

Proper cleaning will help ensure performance and prolong the life of the machine. Make sure the switches are turned off and machine is unplugged before cleaning. It is recommended the machine blades are cleaned after 4 hours of continuous use. Compressed air, a shop vacuum, Twister Clean, WD-40, Simple Green, mineral oils and non-stick cooking oil are the only products endorsed by the manufacturer. High pressure water can also be used when machine is disconnected from its power source.

There are different methods of cleaning depending on the material being processed. High pressure water or no water are both equally popular. For hard to clean areas, allowing a liberal coating of Twister Clean to soak in will help loosen up most materials. Note: High pressure water can damage the tumbler, so caution and common sense should be used.



Warning

The following should only be done when it is certain the power has been disconnected.

Protective covers /without water

On the inside of the protective covers, a small flat object for scraping paint can be used after the cleaner has had time to soak.

Blades /without water

Allowing the blades to pre-soak in cleaner and then using a rag works very well. Never slide your fingers down the edge of the blades lengthwise. The blades may look dull; however, they can cut someone very easily.

Tumbler and brush /without water

Heavily soaking the tumbler with Twister Lube and allowing the tumbler to run for 10-15min (without plant material inside) will help remove any residue. The brush can then be cleaned with a shop vacuum. Soaking the tumbler in a garbage can full of water and mild detergents is another effective cleaning method. Soaking the tumbler in the tumbler cleaner (Sold separately) will clean it quickly and effectively.

Cleaning with water

There are many ways to clean the machine with water. The following has been found to be very effective. First, spray Twister Clean to soften hard buildup. Next, spray on the recommended degreaser. Finish by spraying the machine down with water (High pressure is acceptable, but be careful when using it on tumbler).



Note: The machine can have hundreds of hours of use and still look brand new when following proper cleaning procedures. Non-approved degreasers can damage the finish and melt the nylon brush.

Specifications

Input Voltage120V
Current Draw	12A
Weight	215lbs/97.5kg
Length	42.5in/107.9cm
Width, with wheels	27.5in/69.9cm
Width, without wheels	20.5in/52.2cm
Height32.5in/82cm
Height without wheels30.5in/76cm
Discharge	6"/152mm

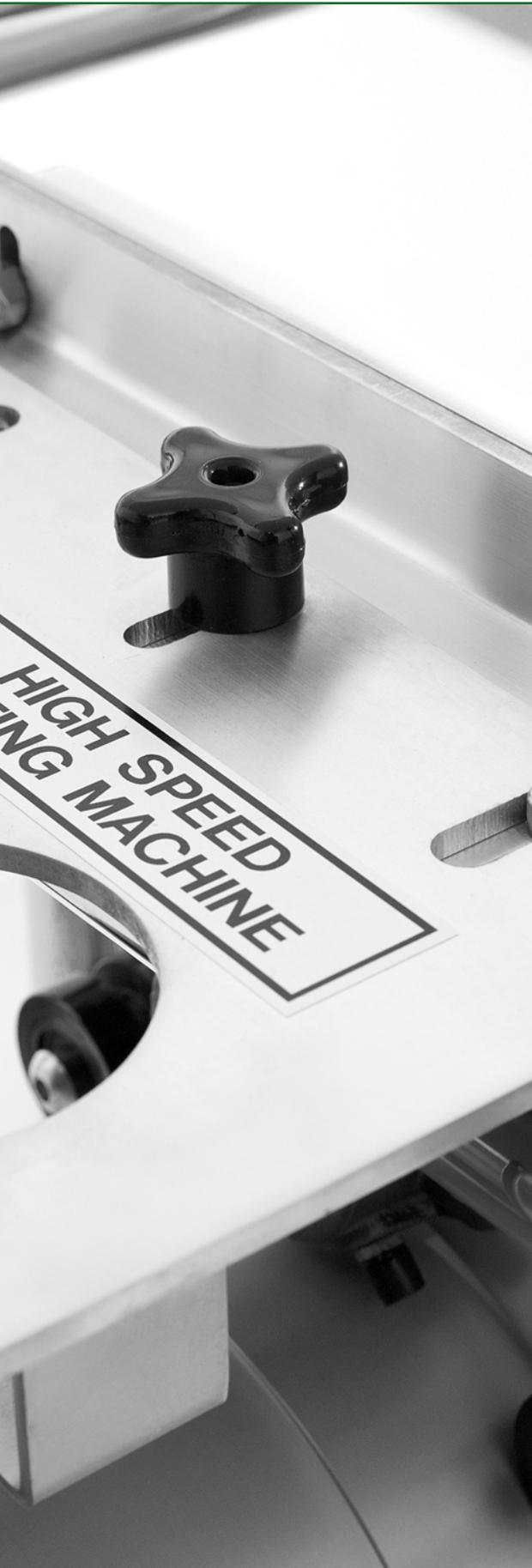
Additional Requirements

Extension cord	14/3 AWG (min AWG) 50ft/15m (max length)
Lubrication	Non-stick cooking oil WD-40 (for extended storage) Blue Grease

Tools Required

Belt cover5/32 hex key
Tumbler adjustment	7/32 hex key and 5/8 wrench
Bed knife, Nylon brush3/16 hex key
Rollers	1/4 hex key and 11/16 wrench
Bed knife adjustment	5/8 wrench
Reel blade belt7/32 hex key
Hopper adjustment5/32 hex key and 7/16 wrench





Troubleshooting

Tumbler makes grinding sound

This could be due to damage to the tumbler causing it to rub or it may just need to be adjusted further from the blades.

Tumbler motor shakes

This is likely due to debris caught in the pulleys somewhere.

Blade motor is very hot

The blade motor can get very hot if ran for long periods. This is normal. The motor is thermally protected and will turn off if too hot.

There is a high pitch squeal coming from the blades

This can be due to the blade rubbing the protective cover if the cover was dropped or bent. This can also indicate the machine needs cleaning.

There is a high speed ticking sound coming from the blades

This is normal. A ticking sound is the blades making slight contact. This is necessary to maintain the self-sharpening of the blades. If the sound is more than a faint ticking sound, stop and unplug the machine. Check for adjustment and damage to the blades.

Debris is getting clogged up in the vacuum inlet

Depending on the model of vacuum, there may be a safety screen covering the inlet. Clear the blockage from the screen.

The circuit breaker keeps tripping

This is typically caused by too long or undersized cord. Also ensure the machine is not sharing a circuit with other devices. Do not increase circuit breaker size.

The blade motor cycles on startup

This is typically caused by too low of a voltage. Excessive distances from transformers and/or electrical panels can reduce voltages. Too long or undersized extension cords may also cause cycling. The blade belt may also be adjusted too tight.

There is a lot of material buildup on the brush and tumbler

Increase frequency and amount of lubricant applications or clean the machine.

Suction from the vacuum seems weak

Ensure there is nothing blocking the hose. Clean the upper filter on the vacuum. A clean or new filter will keep performance high. Buildup can also accumulate in the vacuum housing around the impeller, reducing performance. Unplug the vacuum and remove the inlet housing to clean inside impeller housing.

The material comes out of the machine under processed

Ensure all components are on and suction is high. Ensuring the machine is level will also increase quality. Keeping the tumbler half full will also ensure quality. Some materials may benefit from a second pass through the machine.

There is too much suction

Increasing hose length and adding bends will reduce suction.

The blade motor won't start

This is likely due to poor adjustment or lack of lubrication or cleaning on previous use. If residue buildup hardens, it can cause the motor to bind on subsequent use.

The start button for the blade lights the LED indicator however the motor does not respond

This is a safety feature that protects the motor. The motor has overheated and is in cool down mode. The blades likely need cleaning or adjustment. An improper tension on the blade belt is also possible. It may take several minutes for the system to reset. It will continue to happen if the problem is not addressed.



Manufacturer's Warranty

The manufacturer will repair or replace, without charge, any parts proved defective in material or workmanship for a period of 2 years.

The warranty period will begin on the date the machine is purchased by the initial purchaser. Twister warranty defects can be remedied at any authorized service dealer or directly at the manufacturer. Any work deemed valid due to a defective part will be free of charge. Any manufacturer approved replacement part may be used for any warranty maintenance or repair.

You may be denied warranty coverage if your machine has failed due to abuse, neglect, improper maintenance, improper electrical connection, normal wear, accident or unapproved modifications.

The manufacturer assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the product. In no event will the manufacturer be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by negligence of the manufacturer or otherwise.

If warranty repair is required, please contact the manufacturer at 1-888-254-3204 or support@keirton.com and provide the following information:

- 1) Model and serial number (located on underside of motor plate).
- 2) Proof of purchase date.
- 3) A copy of the original Warranty Registration Card (Unless registration was completed online).
- 4) Details of the defect or problem (including photos/video).

The machine or defective part then must be returned to the manufacturer for analysis and replacement.

If you have any questions regarding your warranty rights and responsibilities, please contact the manufacturer at support@keirton.com.



DO NOT return the machine to the place of purchase for repair or warranty claims. The place of purchase can only sell replacement parts and will not repair warranty issues unless it is noted as an authorized repair dealer.







TWISTER T2

