

MAXCESS

MAGPOWR



TIDLAND

Tidland Blade Sharpening System

Installation, Operation and Maintenance



EN

MI 727946 1 G

CONTENTS

Contact information	2
Important safety information	3
General	3
Intended purpose	3
Safety symbols	5
Maximum inputs	6
Transporting the unit	6
Safety instructions for operating personnel	7
Safety instructions for operation	8
Safety instructions for maintenance	9
Notice about particular dangers	10
Overview	11
Features	11
Specifications	13
Recommended tools and spare parts	13
Installation requirements	14
Unit weight	14
Power	14
Air supply	14
Operation	15
Counters	15
Operating the blade sharpening system	16
Configuring the blade sharpening system	17
Adjusting the hone plate assembly	17
Configuring the drive hub	17
Changing the cartridge dovetail clamp assembly	18
Removing the existing dovetail clamp	18
Maintenance	24
Changing the tool bit edge	24
Replacing the hone plate	26
Sensor locations	27
Vacuum system	28
Troubleshooting	29
Declaration of Conformity	31

CONTACT INFORMATION



Manufactured by

Tidland

2305 SE 8th Avenue
Camas WA 98607

Tel.
360.834.2345
800.426.1000

Authorized Representative

Fife-Tidland GmbH

Max-Planck-Strasse 8-10
65779 Kelkheim
Germany

Siemensstrasse 13-15
48683 Ahaus
Germany

Tel.
+49.6195.7002.0
+49.6195.7002.933

IMPORTANT SAFETY INFORMATION

General

The Tidland Blade Sharpening System has been built state-of-the-art and complies with the generally recognized and applicable safety regulations. Injury to the operator (or to third parties) or damage to the unit may occur if it is

- operated by untrained personnel
- used for unintended purposes
- maintained and serviced improperly.

Read and understand all instructions before operating the unit. Failure to follow instructions may cause the unit to function incorrectly and can cause serious injury.

While operating the unit, follow all existing plant safety instructions and/or requirements. Compliance with federal, state, and local safety regulations is your responsibility. Be familiar with them and always work safely.



Read and understand all safety warnings and instructions before operating machine. Keep the instructions near the machine at all times.



Maxcess Technical Services 405.821.9052
Tidland Customer Service (USA) 800.426.1000 (Outside USA) 360.834.2345

Intended purpose

The Blade Sharpening System is intended exclusively for the sharpening of Tidland Class II and Class III compound bevel dished blades installed in Tidland blade cartridges and used in shear slitting. There is no other intended purpose.

The Blade Sharpening System may only be operated within the technical limits and only with equipment that has been designated and cleared by Tidland.

These instructions must be observed and followed. Another application or an application exceeding these designated applications is considered unintended.

The operator of the Blade Sharpening System is liable for any and all resulting damages. This applies also to unauthorized modifications made to the Blade Sharpening System. The intended use also includes the observance of any and all notices contained in these installation instructions regarding:

- Safety
- Installation
- Operation and
- Maintenance

IMPORTANT SAFETY INFORMATION

Information about safety instructions

The safety instructions and symbols described in this section are used in these operating instructions. They are used to avoid possible dangers for users and to prevent material damage.



SIGNAL WORD

Source of danger and its results
Avoiding dangers

The signal word **DANGER** refers to the danger of death or serious bodily injuries.

The signal word **WARNING** refers to the danger of moderate to severe bodily injuries.

The signal word **CAUTION** refers to the danger of slight to moderate bodily injuries or material damage.

IMPORTANT SAFETY INFORMATION

Safety symbols used in this manual



Wear ear and/or eye protection while operating machine.



Warning

Unit weight is 576 lbs (261 kg)
Cart weight is 114 lbs (52 kg).
Do not lift manually.



Warning

Unit is top heavy.
Unit can tip if cart comes to sudden stop.
Use fixed casters at one end of cart to ensure unit is rolled in the most stable direction.



Warning

Knife blades are sharp.
Can cause serious injury to hands.
Wear protective gloves when handling knife blades.



Warning

Pinching hazard.
Can cause serious injury to hands.
Wait until all moving parts come to a complete stop before reaching into machine.



Danger

High voltage.
Risk of electrical shock or machine damage; do not open electrical drawer.
Service to be performed by Maxcess qualified technicians only.



Caution

Blade splinters and chips are sharp.
Use protective gloves when handling waste material.
For your safety, ensure that the vacuum hose is always connected to a manufacturer's approved receptacle.



Information

This mark identifies a process and/or operator steps. Execute steps in sequence top to bottom. Observance of correct procedures will assure a safe, sound and efficient handling of the knifeholder.

Notices and symbols directly attached to the Blade Sharpening System, such as danger signs, operating signs, arrows indicating a direction of rotation, component identification, etc., must be strictly observed. Notices and symbols directly attached to the Blade Sharpening System should not be removed and shall be maintained in a completely legible condition.

IMPORTANT SAFETY INFORMATION

Maximum inputs

110 VAC Blade Sharpening System

The nominal 110 Volt AC Blade Sharpening System power input shall not exceed 150 volts with a maximum potential to ground of 150 volts (this applies to cord and plug connected units). The power source shall have a fuse or circuit breaker size of 20 amperes maximum. The short circuit current rating (SCCR) is 10 kiloamperes.

220 VAC Blade Sharpening System

The nominal 220 Volt AC Blade Sharpening System power input shall not exceed 250 volts with a maximum potential to ground of 300 volts. (This applies to cord and plug connected units.) The power source shall have a fuse or circuit breaker size of 10 amperes maximum. The short circuit current rating (SCCR) is 10 kiloamperes.

The air input is 150 psi (10.3 bar) maximum; 15 CFM (7.08 l/s) minimum.

The optimal operating range is 80-100 psi (5.5-6.9 bar).

Clean, non-lubricated, dry air is required for optimal performance of the Blade Sharpening System.

Transporting



Unit weight with cart is 690 lbs (313 kg).

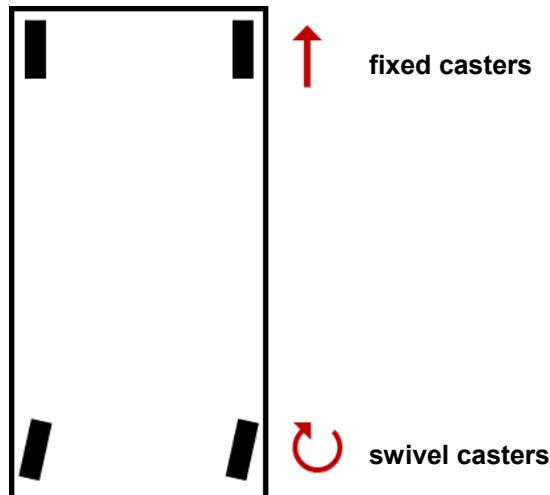
Do not lift manually.



Unit is top heavy.

If your unit is equipped with swivel casters, always push the Blade Sharpening System on cart in the lengthwise direction for maximum stability.

Store and operate the Blade Sharpening System on a flat, horizontal surface



IMPORTANT SAFETY INFORMATION

Safety instructions for operating personnel

The Blade Sharpening System may be operated only in a fully assembled condition and only as intended. Unsafe operating conditions must be resolved immediately.

Before operating the Blade Sharpening System, all installers, operators or maintenance personnel must read and understand all instructions and safety warnings provided in the user manual.

Keep this manual near the Blade Sharpening System at all times.

Tidland accepts no liability for damages and accidents caused by non-observance of the operating instructions. Follow the regulations for the prevention of accidents and all other generally recognized safety regulations. The responsibilities for operation, maintenance and servicing of the Blade Sharpening System should be clearly assigned and followed.

All operators and maintenance personnel must wear appropriate safety gear as designated. This may include protective gloves, safety goggles, ear protection and protective clothing.

If safety-relevant changes to the operating performance are occurring, or if the Blade Sharpening System malfunctions, shut the unit down immediately and report the incident.

Keep first-aid equipment (first-aid box, eye rinsing bottles, etc.) available within easy reach.

All personnel should have knowledge of the location and operation of fire extinguishers, and the procedure for reporting and fighting fires.

During inspection, maintenance and repair of the Blade Sharpening System, refer to the instruction manual for procedures.

Only qualified or trained personnel may operate or perform maintenance and repairs on the Blade Sharpening System.

Personnel undergoing training and qualification may only work on the Blade Sharpening System under supervision by trained personnel.

IMPORTANT SAFETY INFORMATION

Safety instructions for the operation of the blade sharpening system



During all activities relating to the operation, inspection, maintenance and repair of the Blade Sharpening System the procedures to power up and shut down as specified in these instructions and the notices regarding maintenance must be followed.

The Blade Sharpening System may only be commissioned in a fully assembled and operational condition.

Before operation, ensure that all protective and safety installations, such as removable guards, are installed and fully functional. Do not bypass safety installations.

The Blade Sharpening System should be inspected for externally visible damage before every startup.

Changes (including operational behavior) should be reported immediately to the responsible person or the supervisor in charge.

Shut down and secure the Blade Sharpening System immediately in case of malfunctions. Have malfunctions eliminated immediately by qualified trained professionals.

IMPORTANT SAFETY INFORMATION

Safety instructions for maintenance



Before beginning maintenance, inform all operating personnel about maintenance requirements and procedures. A supervisor in charge shall be designated.

Observe the timelines for regular tests or inspections as prescribed or as stated in the installation instructions.

Suitable workshop equipment is mandatory for the execution of maintenance works.

The Blade Sharpening System must be shut down completely for maintenance, repair and servicing activities and be secured against unexpected repowering.

Carry a flashlight in ensure sufficient illumination at the Blade Sharpening System during maintenance.

Maintenance on pneumatic installations of the Blade Sharpening System may only be carried out by trained professionals or by instructed personnel working under the supervision and guidance of a trained professional.

Visually check pneumatic hoses daily for:

- Damage to the outer layer (e.g. chafe marks, cuts, tears, cracks),
- Deformations which do not correspond to the natural shape of the hose, in a pressurized or depressurized condition or when bent, e.g. layer separation, bubble formation,
- Leaks (visual and acoustic check).

Visually check hose fittings daily for:

- Damages or deformations of the hose fittings (impaired tightness),
- Loose adjustments of the hose in the fittings,
- Fitting corrosion and fatigue.

Check hoses annually in detail. Even if no damage can be identified, pneumatic hoses should be replaced after six years.

Replace present wearing parts and filter cartridges of the pneumatic system within the prescribed or appropriate time frames, even if no safety-relevant faults can be detected.

Always retighten threaded connections that were loosened during maintenance and repair works. If prescribed, tighten screws with torque wrench.

If it is necessary to disassemble safety installations for maintenance or repair works, reassemble and test safety installations immediately following the completion of maintenance and repair.

Clean the Blade Sharpening System, particularly connections and screw fittings, of all debris and residue at the beginning of maintenance, repair or servicing.

Do not use aggressive or solvent-containing cleaning agents. Use fiber-free cloths. Use only mild cleaning agents. Follow manufacturer's instructions. Do not use organic solvents as the risk of fires and explosions exists.

Make sure that operational and auxiliary materials are disposed of in a safe and environmentally-friendly manner.

Notice about particular dangers



Pneumatics

Only personnel with special knowledge and experiences in the pneumatics field are permitted to work on pneumatic installations.

During maintenance works on the pneumatics system the maintenance personnel must be fully familiar with the pneumatics circuit diagram and be fully briefed about the potential consequences of misactions.

Inspect daily all piping, hoses and threaded connections for tightness. Shut down and repair the Blade Sharpening System immediately if an air leak is detected.

Before beginning repair works, depressurize the pneumatic system and leave the air lines open.

Clean debris and contamination from fittings and threaded connections of the pneumatic system before beginning maintenance.

Maintain all safety valves regularly.

Oils, greases and other chemical substances

Observe and follow the applicable regulations and Material Safety Data Sheets provided by the substance manufacturer regarding storage, handling, utilization and disposal.

Noise

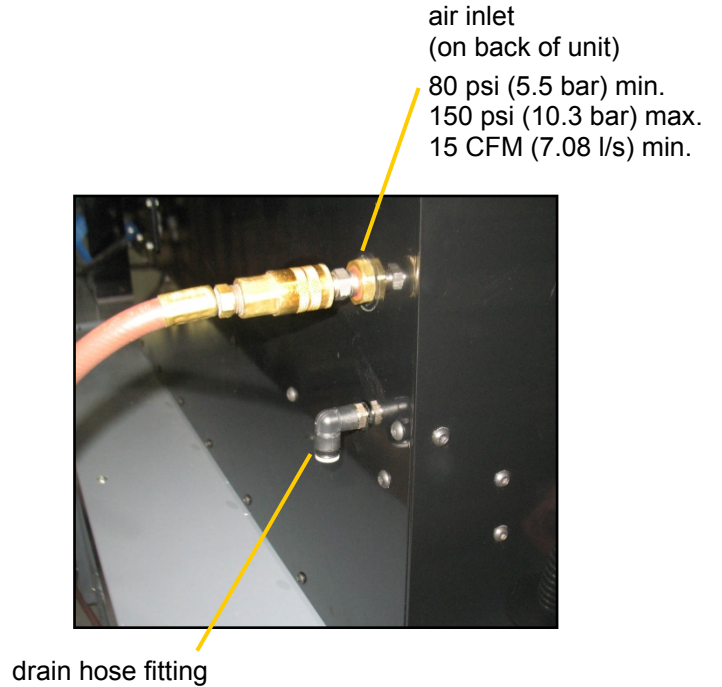
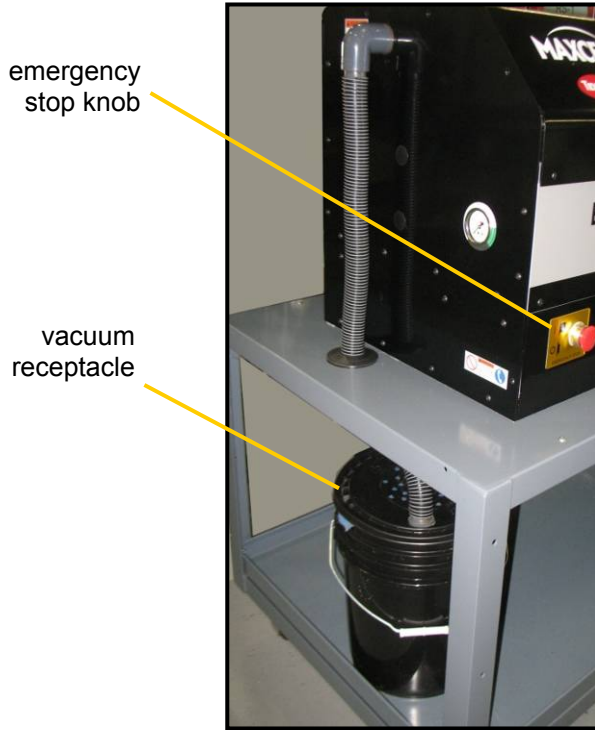
The declared A-rated equivalent continuous sound pressure level at the Tidland Blade Sharpening System during operation is 78.0 dB(A) at a distance of 1 meter.

If the Blade Sharpening System is operated by itself: no ear protection is required as personal protective gear. If the Blade Sharpening System is used in an enclosed work space together with other installations or machinery and an increased sound pressure level can be created in the work space, then the operator must be equipped with and use the required protective gear.

OVERVIEW

Features

The Tidland Blade Sharpening System is a programmable logic controlled lathe that is designed to sharpen Tidland Class II and Class III compound bevel dished blades used in shear slitting.



OVERVIEW

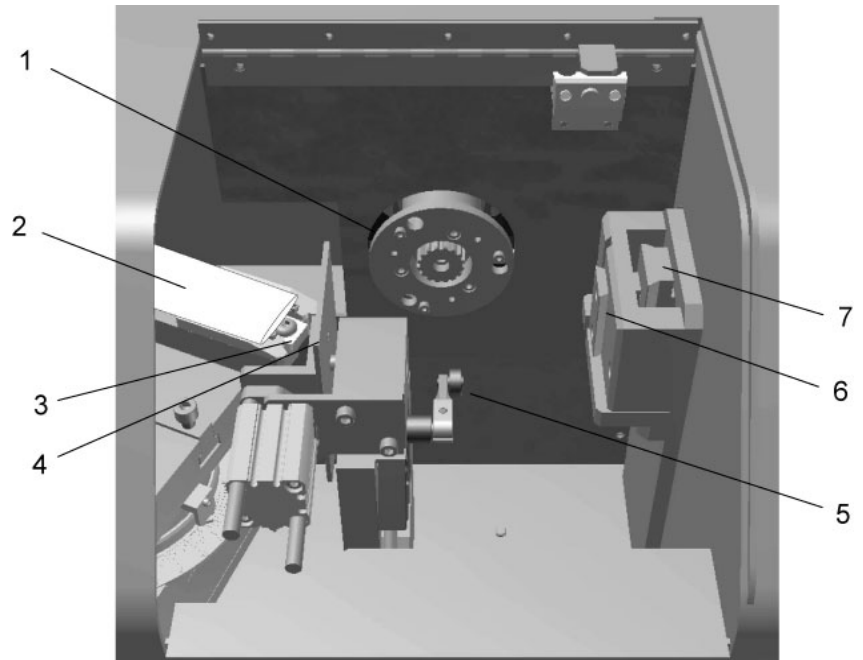
Features



Interior parts

- 1 Cartridge drive hub
- 2 Vacuum nozzle
- 3 Tool bit
- 4 Honing assembly
- 5 Cartridge detection switch
- 6 Dovetail mount, Class II*
- 7 Dovetail mount, Class III*

* Performance Series Shear dovetails are shown here. Dovetail mounts for the Class II and III e-Knifeholder are also available. See page 18.



OVERVIEW

Specifications

Physical dimensions	38" w x 23" h x 24" d (37 cm x 58 cm x 62 cm)	
Unit weight	690 lbs (313 kg) total	
Blade Sharpening System	576 lbs (261 kg)	
Cart (if equipped)	114 lbs (52 kg)	
Electrical	110 VAC, 60 Hz, 16 A 220 VAC, 50 Hz, 6 A	
Pneumatic	80 psi (5.5 bar) minimum 150 psi (10.3 bar) maximum 15 CFM (7.08 l/s)	
Air pressure, operating	80-100 psi (5.5-6.9 bar)	
Noise output	78.0 dB(A) @ 1 meter	
Operating temp (ambient)	104° F / 40° C	
Blade diameters	Maximum	Minimum
Class II	5.906" (150 mm)	4.906" (124.6 mm)
Class III	7.874" (200 mm)	6.874" (174.5 mm)
Blade materials	D2; 52-100	
Blade sharpening angles	15-35 degrees	
Tool bit material	Aluminum oxide, sintered	
Blade sharpening cycle time	minimum 1 minute / maximum 2 minutes	

Recommended tools and spare parts

- Tool bits (see page 24)
- Hone plate (725665)
- Hex wrenches: 4 mm, 5/32", 3/16", 1/8"
- Stainless steel mesh protective gloves (Tidland PN 132084)

INSTALLATION

Installation requirements



Warning
Unit is heavy.
Do not lift manually.

Unit total weight with cart is 690 lbs (313 kg)

Transportation and installation method must be able to support this weight. Must be installed and operated on a level surface. (Cart weight is 114 lbs.)

Power

110 VAC Blade Sharpening System

The nominal 110 Volt AC Blade Sharpening System power input shall not exceed 150 volts with a maximum potential to ground of 150 volts. (This applies to cord and plug connected units.) The power source shall have a fuse or circuit breaker size of 20 amperes maximum. The short circuit current rating (SCCR) is 10 kiloamperes.

220 VAC Blade Sharpening System

The nominal 220 Volt AC Blade Sharpening System power input shall not exceed 250 volts with a maximum potential to ground of 300 volts. (This applies to cord and plug connected units.) The power source shall have a fuse or circuit breaker size of 10 amperes maximum. The short circuit current rating (SCCR) is 10 kiloamperes.

Air supply

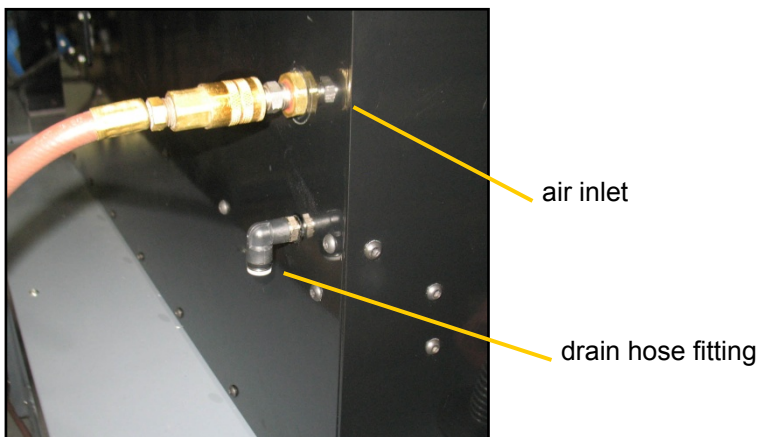
80 psi (5.5 bar) minimum/150 psi (10.3 bar) maximum

15 CFM (7.08 l/s) minimum

Unit operates at 80-100 psi (5.5-6.9 bar) – factory set internal regulator

Use clean, dry, non-lubricated air.

If the supply air is too wet, water will drain from the unit through an outlet in the back, located under the air inlet. The drain fitting accepts a 5/16" O.D. hose.



Operating the blade sharpening system



Knife blades are sharp.
Can cause serious injury to hands.
Wear protective gloves when handling knife blades.



Pinching hazard.
Can cause serious injury to hands.
Wait until all moving parts come to a complete stop before reaching into machine.



For your safety, ensure that the vacuum hose is always connected to a manufacturer's approved receptacle.

Counters

The Tidland Blade Sharpening System is equipped with two counters, located on the front of the unit, that record the number of blades sharpened. The top counter, labeled RESET, can be reset to zero by the operator. The bottom counter, labeled TOTAL, cannot be reset.

The Blade Sharpening System must be allowed to complete the sharpening process in order for the counter to register. Do not open the acrylic door until all moving parts have come to a full stop. Only then shall the door be opened and the cartridge removed.

You may wish to reset the counter whenever you change the cutting tool.

Operating the blade sharpening system



Operation

1. Attach the power cable to the Blade Sharpening System and plug the unit into a power source. Make sure that the line voltage you are running matches the voltage specified on the unit nameplate.
2. To turn on the unit, pull the red emergency stop power button out. There is a 15-20 second delay before the unit is ready to start.

Note

If the previous sharpening process was interrupted, the system will reset itself. Wait for the homing process to complete and for the green light to stop blinking.

3. Open the clear acrylic door.
4. With the knife blade facing the drive hub assembly, install the Tidland blade cartridge on the dovetail mount.
5. Close the door.
6. Check LED status: no LEDs on = ready to start. (Steady green LED indicates the presence of a sharpened blade – go to Step 9.)
7. Push the green ▷ start button.
 - If all operating conditions are met, the green LED blinks, indicating that the blade sharpening process has begun.
 - If any operating condition is not met, the yellow LED will turn on, indicating that the operator should check the operating instructions to determine the fault. The blade sharpening process cannot begin until the fault is corrected. See page 29 for troubleshooting the unit.
8. When the sharpening process is complete, the drive hub retracts and the system resets itself in preparation for the next blade sharpening: the green LED changes to a steady state.
9. When all moving parts have stopped, open the door and remove the blade cartridge.

Note

Blade sharpening may be repeated without opening the door; go back to Step 7 to repeat.

OPERATION

Configuring the blade sharpening system

There are dovetail configurations available to mount the following knifeholder blade cartridge models:
Tidland Performance Series, Class II and III
Tidland Series C, Class II and III
Tidland e-Knifeholder, Class II and III.

If changing to another knifeholder class, you will need to adjust the position of the hone plate assembly and the drive hub bolts. See page 18 for instructions about changing the dovetail mounts.

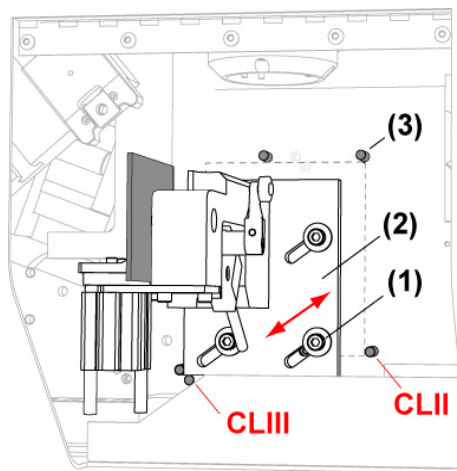


Disconnect power to the Blade Sharpening System before performing maintenance or setup procedures.

Adjusting the hone plate assembly

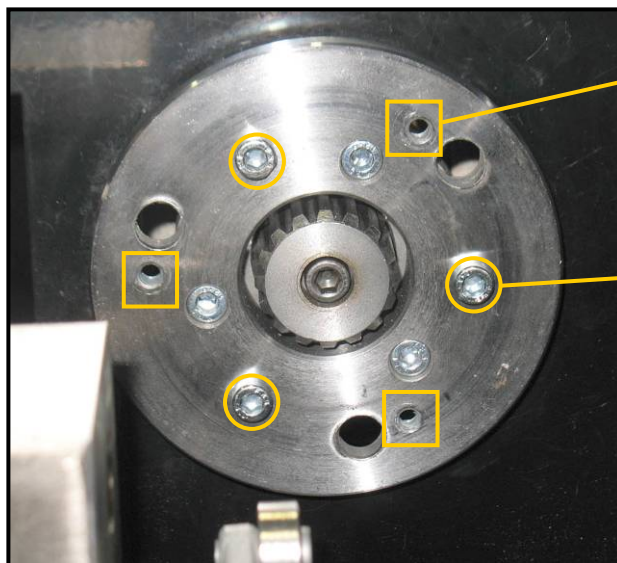
1. Loosen the bolts (1) in the bottom floor of the unit.
2. Slide the honing assembly (2) in the direction required for your knifeholder class until it stops against the pins (3).
3. Tighten the bolts.

See also *Replacing the hone plate* (p. 26)



Configuring the drive hub

Ensure that the three M5 socket head cap screws are installed in the appropriate locations for the knifeholder class. These screw heads engage with the knifeholder blade hub.



PERFORMANCE SERIES
CLASS III

SERIES C
CLASS II AND III

PERFORMANCE SERIES
CLASS II



If the screw heads do not align in the cartridge blade hub, the drive hub needs to be aligned. Contact Maxcess Technical Services.

OPERATION

Changing the cartridge dovetail clamp assembly

There are dovetail mount kits available for the following knifeholder blade cartridge models:

Tidland Performance Series, Class II and III

Tidland Series C, Class II and III (swing cartridge only)

Tidland e-Knifeholder, Class II and III

You will need to identify the existing dovetail mount that is installed in your unit and remove it before installing the new kit. Recommended tools include:

Hex drive wrenches – 4 mm and 9/64"

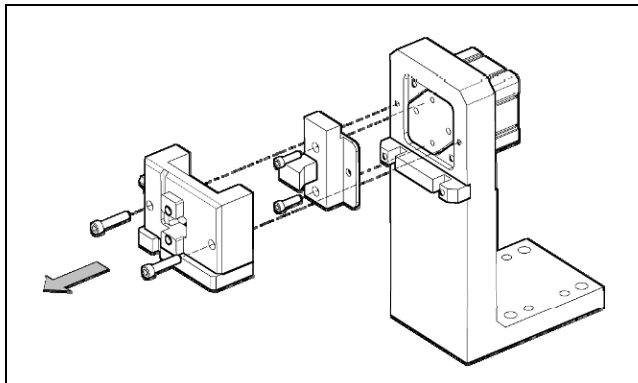
Loctite 242

In addition to installing the dovetail kit, you will need to adjust the position of the hone tower and the drive hub bolts. See page 17.

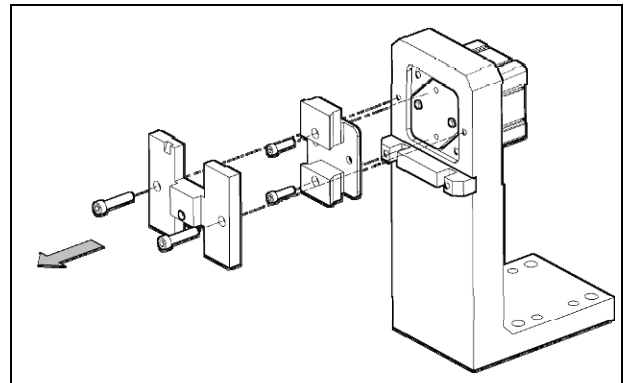


Disconnect power to the Blade Sharpening System before performing maintenance or setup procedures.

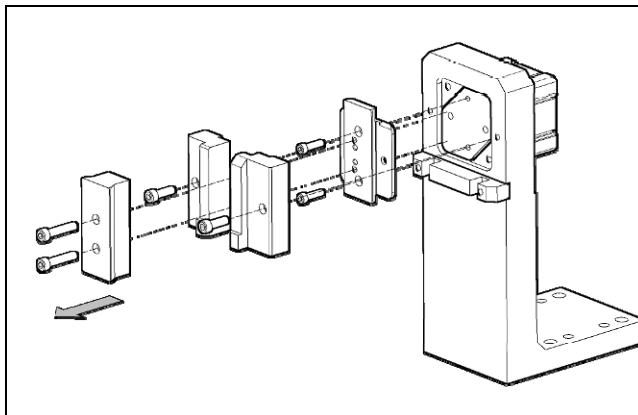
Removing the existing dovetail clamp



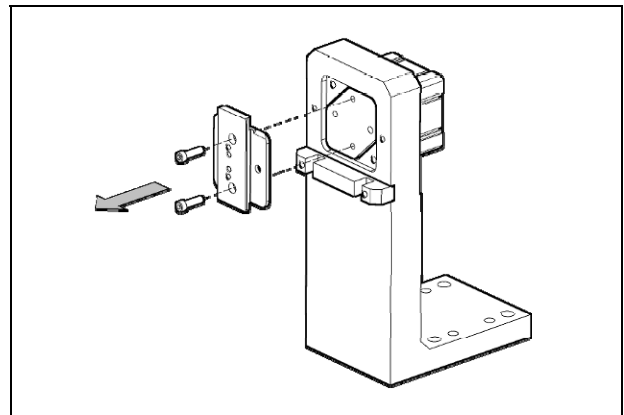
Class II Performance Series and Series C



Class III Performance Series and Series C



Class II e-Knifeholder



Class III e-Knifeholder

Changing the dovetail clamp assembly

In addition to installing the dovetail kit, you will need to adjust the position of the hone tower and the drive hub bolts. See page 17.

The dovetail mount is shipped with an air hose assembly installed for use with the 360° Swing Blade Guard. Do not disconnect the hose. See page 23 for instructions.

Performance Series and Series C

Class II

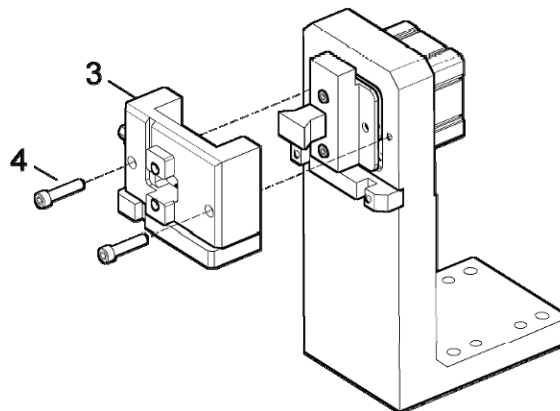
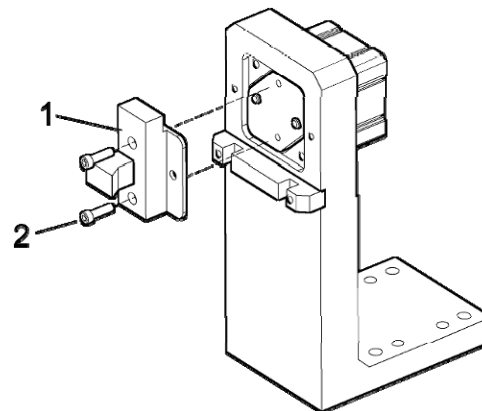
The optional Blade Guard Safety Attachment, if installed on your blade cartridge, must be altered to provide clearance for blade sharpening. Contact Tidland Customer Service for more information.

Note: Use Loctite 242 on all screws during assembly.

1. Remove the existing dovetail clamp (p. 18)
2. Use screws (item 2) to install dovetail base (item 1).
3. Use screws (item 4) to install top base (item 3).

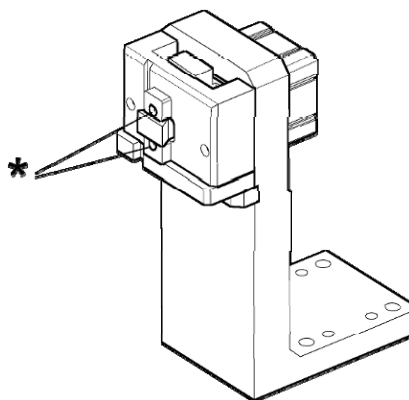
Item	Description	Part No.
1	Dovetail Base (assembled)	
	Base	742075
	Dovetail	726090
	Dowel pin 5/32" x .375 lg *	732745
	SHCS	
2	SHCS 10-32UNF x .75 lg	732800
3	Top Base (assembled)	
	Tail base	726091
	Clamp base	726089
	O-ring (Parker 2-104) *	745578
4	SHCS M5 x 50 mm	133103

* not shown



For use with the 360° Swing Blade Guard:

- * Two o-rings are factory-installed with Loctite. Ensure that they are present in the final assembly; the air system will not function properly without them.



OPERATION

Changing the dovetail clamp assembly

In addition to installing the dovetail kit, you will need to adjust the position of the hone tower and the drive hub bolts. See page 17.

The dovetail mount is shipped with an air hose assembly installed for use with the 360° Swing Blade Guard. Do not disconnect the hose. See page 23 for instructions.

Performance Series and Series C

Class III

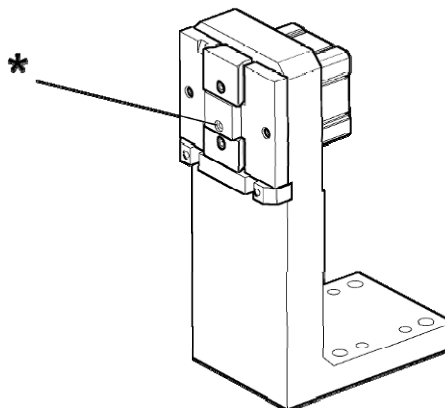
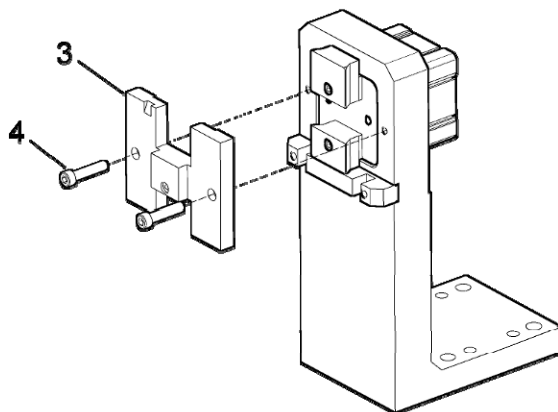
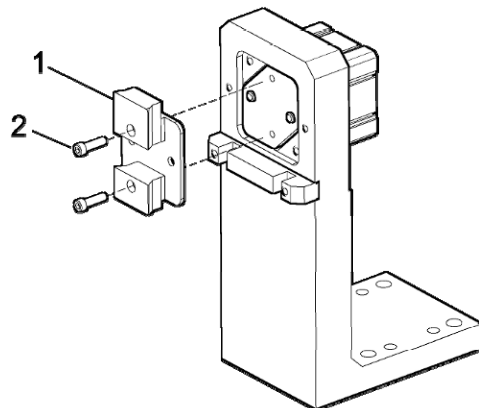
The optional Blade Guard Safety Attachment, if installed on your blade cartridge, must be altered to provide clearance for blade sharpening. Contact Tidland Customer Service for more information.

Note: Use Loctite 242 on all screws during assembly.

1. Remove the existing dovetail clamp (p. 18)
2. Use screws (item 2) to install dovetail base (item 1).
3. Use screws (item 4) to install top base (item 3).

Item	Description	Part No.
1	Dovetail Base	726092
2	SHCS 10-32UNF x .75 lg	732800
3	Top Base	726095
	O-ring (Parker 2-104) *	745578
4	SHCS M5 x 16 mm	651283

* not shown



For use with the 360° Swing Blade Guard:

- * The o-ring is factory-installed with Loctite. Ensure that it is present in the final assembly; the air system will not function properly without it.

Changing the dovetail clamp assembly

In addition to installing the dovetail kit, you will need to adjust the position of the hone tower and the drive hub bolts. See page 17.

e-Knifeholder

Class II

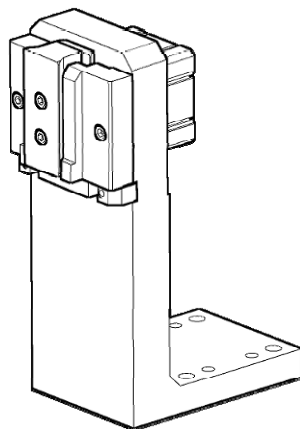
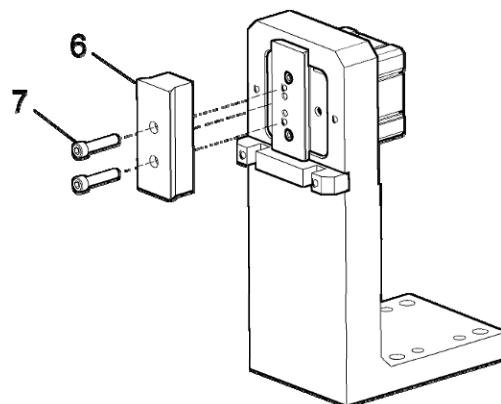
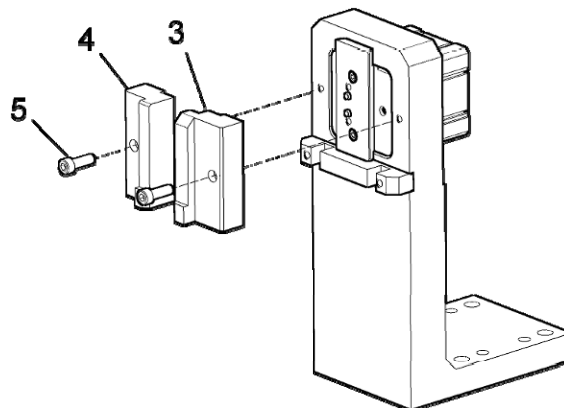
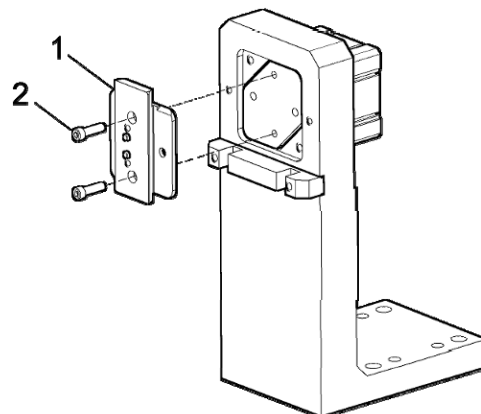
The Blade Guard Safety Attachment on all Tidland e-Knifeholder units must be altered to provide clearance for blade sharpening. Contact Tidland Customer Service for more information.

Note: Use Loctite 242 on all screws during assembly.

1. Remove the existing dovetail clamp (p. 18)
2. Use screws (item 2) to install dovetail base (item 1).
3. Use screws (item 5) to install dovetail side clamps (items 3 and 4).
4. Use screws (item 6) to install dovetail (item 7).

Item	Description	Part No.
1	Dovetail base	726092
2	SHCS 10-32UNF x .75 lg	732800
3	Side clamp, right	726036
4	Side clamp, left	726037
5	SHCS M5 x 25 mm	127638
6	Dovetail	726094
	Dowel pins 5/32" x .375 lg *	732745
7	SHCS M5 x 25 mm	127638

* not shown



Changing the dovetail clamp assembly

In addition to installing the dovetail kit, you will need to adjust the position of the hone tower and the drive hub bolts. See page 17.

e-Knifeholder

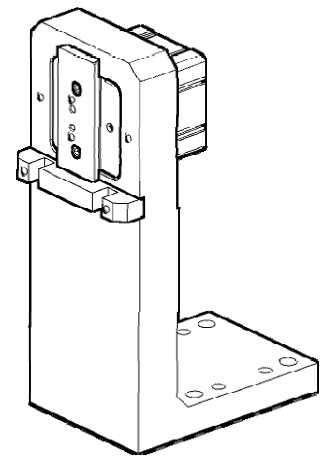
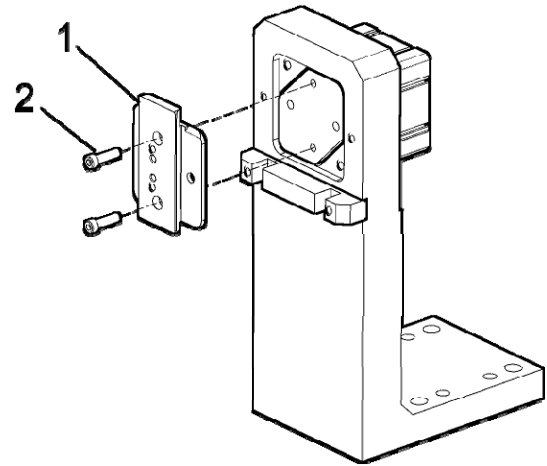
Class III

The Blade Guard Safety Attachment on all Tidland e-Knifeholder units must be altered to provide clearance for blade sharpening. Contact Tidland Customer Service for more information.

Note: Use Loctite 242 on all screws during assembly.

1. Remove the existing dovetail clamp (p. 18)
2. Use screws (item 2) to install dovetail base (item 1).

Item	Description	Part No.
1	Dovetail Base	726097
2	SHCS 10-32UNF x .75 lg	732800



OPERATION

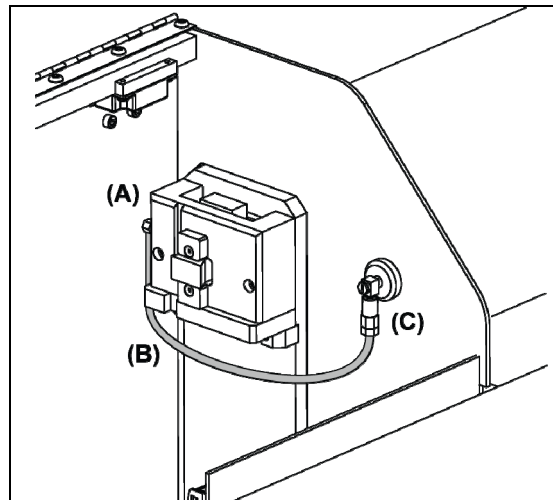
Connecting the dovetail mount air hose

The Class II and III Performance Series knifeholder dovetail mounts are shipped with an air hose attached that supports the use of the 360° Swing Blade Guard.

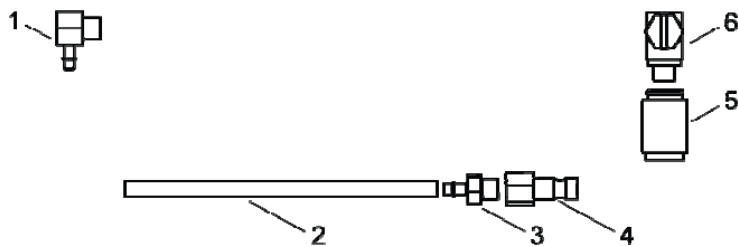


Even if you are not using the 360° Swing Blade Guard, Tidland recommends that you make this air hose connection to prevent debris from building up in the hose and fittings.

1. If you are changing to a Performance Series dovetail mount, the mount will be shipped with the air hose (B) connected at (A).
2. After installing the dovetail mount in your Blade Sharpening System, connect the hose at location (C).



Air hose parts (reference)



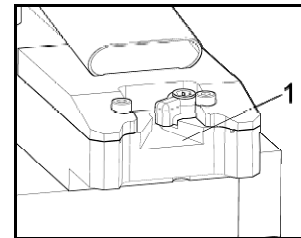
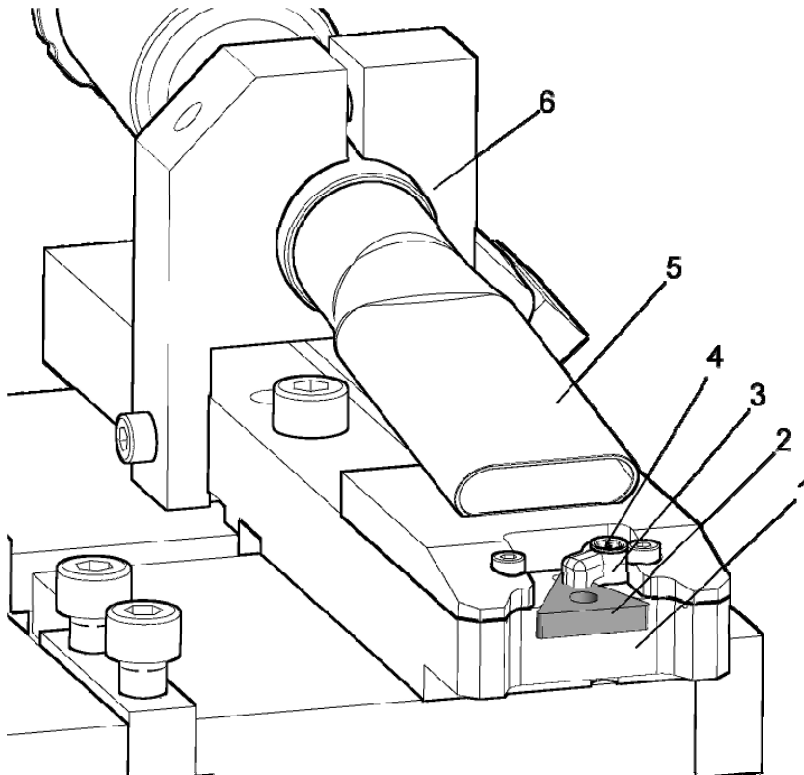
Item	Description	Part No.
	Installed on dovetail mount	
1	Air fitting	250425
2	Air hose, 3/16 OD x 5/64 ID	250452
3	Air fitting barb	250423
4	Plug, QD	132944
	Installed on unit frame	
5	Coupling, QD	250692
6	Air fitting	250428

MAINTENANCE

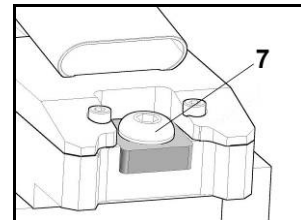
Tool bits

The tool bit has six cutting sides. It can be rotated twice, and then turned over and used again for a total of six times. **Note:** Early models of the Blade Sharpening System use a square tool bit, which can be used for a total of eight times.

Inspect the cutting edge after each use; do not use if worn or damaged with nicks or cracks. When all cutting sides are used, replace the tool bit.



Toolbit holder shown with tool bit removed.



Square bit shown with bolt

Tool bit parts

Item	Description	Triangle tool bit	Square tool bit
1	Tool bit holder	725708	obsolete
2	Tool bit	742898	731363
3	Tool bit clamp	742164	n/a
4	Tool bit clamp screw	742165	n/a
5	Vacuum nozzle	728978	728978
6	Vacuum inlet	n/a	n/a
7	Btn hd cap scr 5/16"-18UNC x .500	n/a	733084

Changing the tool bit



Disconnect power to the Blade Sharpening System before beginning the following procedures.

Triangle tool bit

1. Mark the used cutting edge of the tool bit. (Use a permanent marker.)
2. Using a 1/8" hex drive, loosen – do not remove – the tool bit clamp screw.
3. Slide the tool bit out of the tool bit holder.
4. Clean the mounting surface of the tool bit holder. There should be no dust or debris in the holder when reinstalling the tool bit.
5. Rotate the tool bit to an unused cutting edge and reinstall it in the tool bit holder.
6. Tighten the set screw.

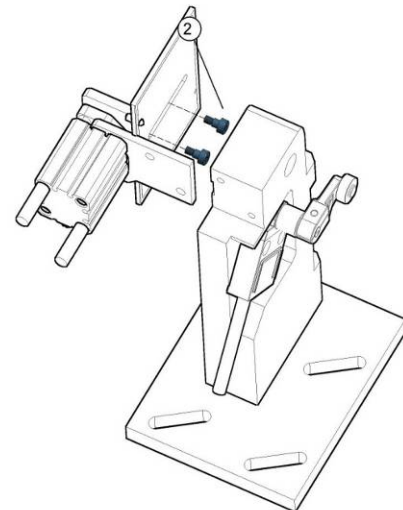
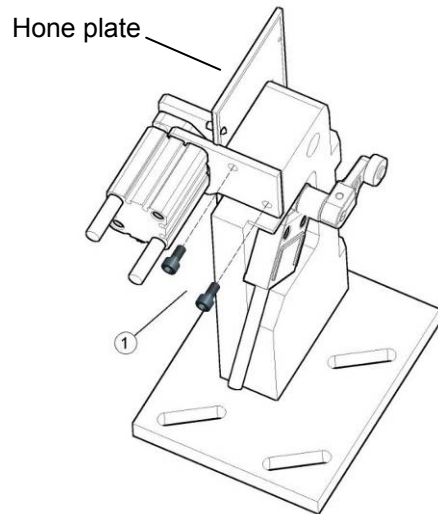
Square tool bit

1. Mark the used cutting edge of the tool bit. (Use a permanent marker.)
2. Pull out the vacuum nozzle from the vacuum inlet for better access to the toolbit.
3. Using a 3/16" hex drive, remove the 5/16" bolt from the tool bit.
4. Lift the tool bit out.
5. Clean the mounting surface of the tool bit holder. There should be no dust or debris in the holder when reinstalling the tool bit.
6. Rotate the tool bit to an unused cutting edge and reinstall it in the tool bit holder.
7. Reinstall the bolt and tighten.

Replacing the hone plate

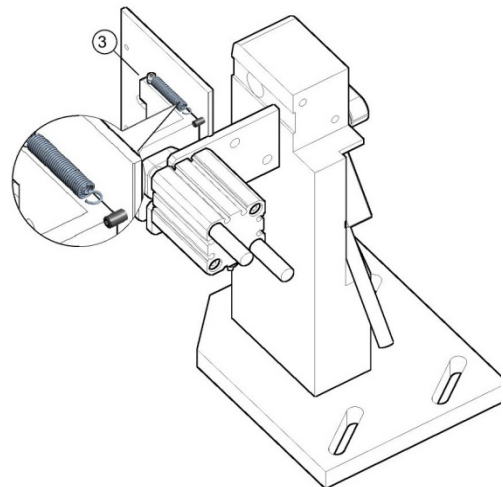
If the blade edge finish is rough, check the edge of the hone plate. If it is also rough, replace it.

1. Remove socket head cap screws (1) from the hone plate bracket and support.
2. Pull cylinder mount and hone plate assembly away from the support.
3. Remove screws (2) that secure the hone plate.



Caution! Some components are under spring tension. Wear eye protection and use care when detaching the springs.

4. On the other side of the hone plate, detach springs (3).
5. Install the new hone plate and reattach the springs.
6. Reinstall the screws that secure the hone plate. The hone plate should be allowed to slide back and forth under spring tension.
7. Reinstall the screws that secure the cylinder assembly to the support.



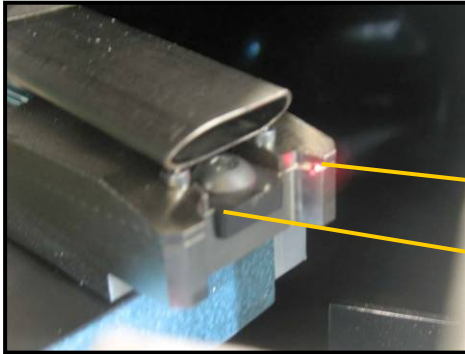
Sensor locations

Keep sensors free of dirt and debris.

Faulty or damaged sensors should be replaced only by authorized Maxcess Service Team personnel.



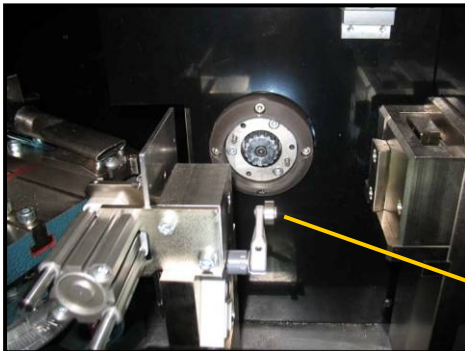
Use only a vacuum to remove debris – DO NOT use compressed air!
Do not remove the top cover of the Blade Sharpening System.



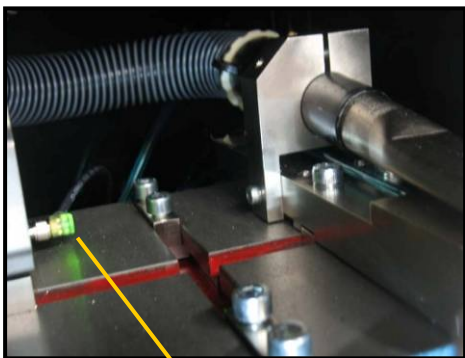
light beam emitter

receiver

blade detect sensor



cartridge detect switch



XY home sensor

Vacuum system



Blade splinters and chips are sharp.

Use protective eyewear and gloves when handling waste material.

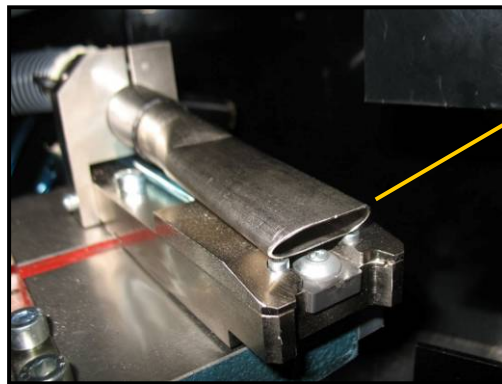


For your safety, ensure that the vacuum hose is always connected to a manufacturer's approved receptacle.

Tidland provides a bucket option to contain chips vacuumed from the inside of the unit. Check the bucket regularly and empty as needed.

If chips begin to collect around the vacuum wand nozzle, remove the elbow fitting from the side of the unit and clean out the hoses. Check the bucket and empty if necessary.

NEVER use compressed air to remove debris from the Blade Sharpening System.



vacuum nozzle

vacuum receptacle

TROUBLESHOOTING

Troubleshooting

For issues that cannot be resolved with this troubleshooting guide, call the Maxcess Service Team.
405.821.6052

Problem	Possible Cause	Recommended Solution
Yellow LED is on	Door open	Close door; wait for X/Y table to go "home."
	Cartridge not fully engaged on dovetail mount	Check cartridge installation.
	Low or no air pressure	Confirm that there is air to the unit. Check air pressure; system operates optimally between 80-100 psi (5.5-6.9 bar). Operating air flow required: 15 CFM (7.08 l/s)
	Drive hub not engaged	If the screw heads on the drive head will not engage with the cartridge hub, the blade sharpener may need an alignment. Call for service.
	Blade detect sensor blocked	Ensure that all sensors are clear of debris. See page 27 for sensor locations. To reduce the risk of lodging chips in the sensors, use a vacuum to remove debris – not a brush.
	Unexpected blade diameter detected	Check for burrs or residue on the blade edge.
	X/Y table not at "home"	Ensure operating conditions are met: door closed, air on, cartridge engaged on dovetail. If unit does not move after 15 seconds, call for service.
	Low or no air pressure	Confirm that there is air to the unit. Check air pressure; system operates optimally between 80-100 psi (5.5-6.9 bar)
Drive hub does not disengage	Pins are stuck in cartridge.	Call for service.
	Check tool bit for wear	Rotate tool bit to unused edge or replace.
Blades not sharp	Check hone plate edge for roughness	Remove debris from edge of hone plate. Replace hone plate if damaged.
	Blade cartridge not seated properly in dovetail mount	<ul style="list-style-type: none"> • Remove cartridge and check for debris or obstruction at dovetail mount; reinstall the cartridge. • Check for correct knifeholder class setup (p. 17).
Blade edge scalloped	Blade cartridge hub bearing worn	Check for looseness at cartridge blade hub; replace blade cartridge bearing if worn. See your knifeholder manual for details.
	Blade sharpener out of alignment	<ul style="list-style-type: none"> • Check drive hub bolts; they should be tight and seated completely. • Call for service.

(Continued)

TROUBLESHOOTING

Problem	Possible Cause	Recommended Solution
Chips collect at vacuum wand nozzle	Chip collector full	Empty chip collection receptacle.
	Chips stuck in vacuum hose	Remove the elbow fitting on the side of the unit and clean out the hoses.
	Vacuum not effective	Make sure vacuum wand nozzle is close enough to the tool bit.
	Insufficient air supply	Ensure 80-150 psi supply and 15 CFM to the unit; verify by the monitoring pressure gauge on the side of the blade sharpener. Drop should not be more than 15 psi when vacuum runs.
	Sharpened cartridge is not present	Install blade cartridge (if necessary) and press ▷ button to start sharpening process.
Green LED is OFF	Motion in progress	Close lid and wait until all moving components have come to a stop.
Green LED is blinking	Sharpened cartridge is present	Remove the sharpened blade cartridge or resharpen (if desired).
Green LED is ON	Supply air is wet	Use clean, dry, non-lubricated air.
Water draining from back of unit	Blade cartridge	<ul style="list-style-type: none"> • Ensure blade clamp is tightened. • Ensure blade cartridge hub bearing is not loose. • Change the knife blade. • Install a different blade cartridge and try sharpening process again.
Unusual noise	Drive hub bolts	<p>Drive hub bolts should be completely seated in the blade cartridge.</p> <p>If the noise persists, record the operating conditions under which you hear the noise and call for service for information.</p>
	Low air pressure	<p>Ensure that the supply air line is fully pressurized before connecting it to the unit.</p> <p>Apply 30 psi minimum to prevent air loss through the drain. (Optimal pressure range for operation is 80-150 psi.)</p>
Excess air loss through the air regulator drain	Internal valve may be stuck	Call Maxcess Technical Services.
	Drain release control is misaligned	



MAGPOWR



TIDLAND

DECLARATION OF CONFORMITY

Manufacturer:

Tidland Corporation
2305 SE 8th Avenue
Camas, WA 98607
USA
Phone: 1-360-834-2345
Web: www.maxcessintl.com

EU Contact:

Fife-Tidland GmbH
Fifestrasse 1
65779 Kelkheim
Deutschland
Telefon: +49-6195-7002-0
Web: www.maxcess.eu

Siemensstrasse 13-15
48683 Ahaus
Deutschland

Models: Blade Sharpening System

Starting year of series manufacture is 2011.

The designated product conforms to the essential requirements of the following European Directives:

- Directive **2006/42/EC** of the European Parliament and of the Council of 12 December 2006 on the harmonization of the laws of Member States relating to machinery as defined in Article 1(1) of the Directive
- Directive **2004/108/EC** of the European Parliament and of the Council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility
- Directive **2002/95/EC** of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)
- Directive **2002/96/EC** of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE)

Referenced European Harmonized Standards:

EN 13218 (Stationary Grinding Machines)
EN 60204-1 (Electrical Equipment of Machines)
EN 983 (Pneumatics)
ISO 11201 (Noise Emitted by Machinery and Equipment)
EN ISO 12100-1
EN ISO 12100-2
EN ISO 14121-1

Donald Smith
Name

Signature

Quality Assurance Manager, Maxcess Int'l USA

Title

Date

August 17, 2011

All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, or translated into any language in any form by any means without the written permission of Tidland.



NORTH AMERICA
Toll Free 800.639.3433
Tel +1.405.755.1600
Fax +1.405.755.8425
sales@maxcessintl.com
www.maxcessintl.com

SOUTH AMERICA
Tel +55.11.3959.0990
Fax +55.11.3856.0990
southamerica@maxcessintl.com
www.maxcessintl.com.br

EUROPE
Tel +49.6195.7002.0
Fax +49.6195.7002.933
sales@maxcess.eu
www.maxcess.eu

INDIA
Tel +91.22.27602633
Fax +91.22.27602634
india@maxcessintl.com
www.maxcess.in

CHINA
Tel +86.756.881.98398
Fax +86.756.881.9393
sales@maxcessintl.com.cn
www.maxcessintl.com.cn

JAPAN
Tel +81.43.421.1622
Fax +81.43.421.2895
japan@maxcessintl.com
www.maxcess.jp

**KOREA, TAIWAN,
AND SE ASIA**
Tel +65.9620.3883
Fax +65.6235.4818
asia@maxcessintl.com

© 2011 Maxcess