

# fastmill.io™

— User Manual —





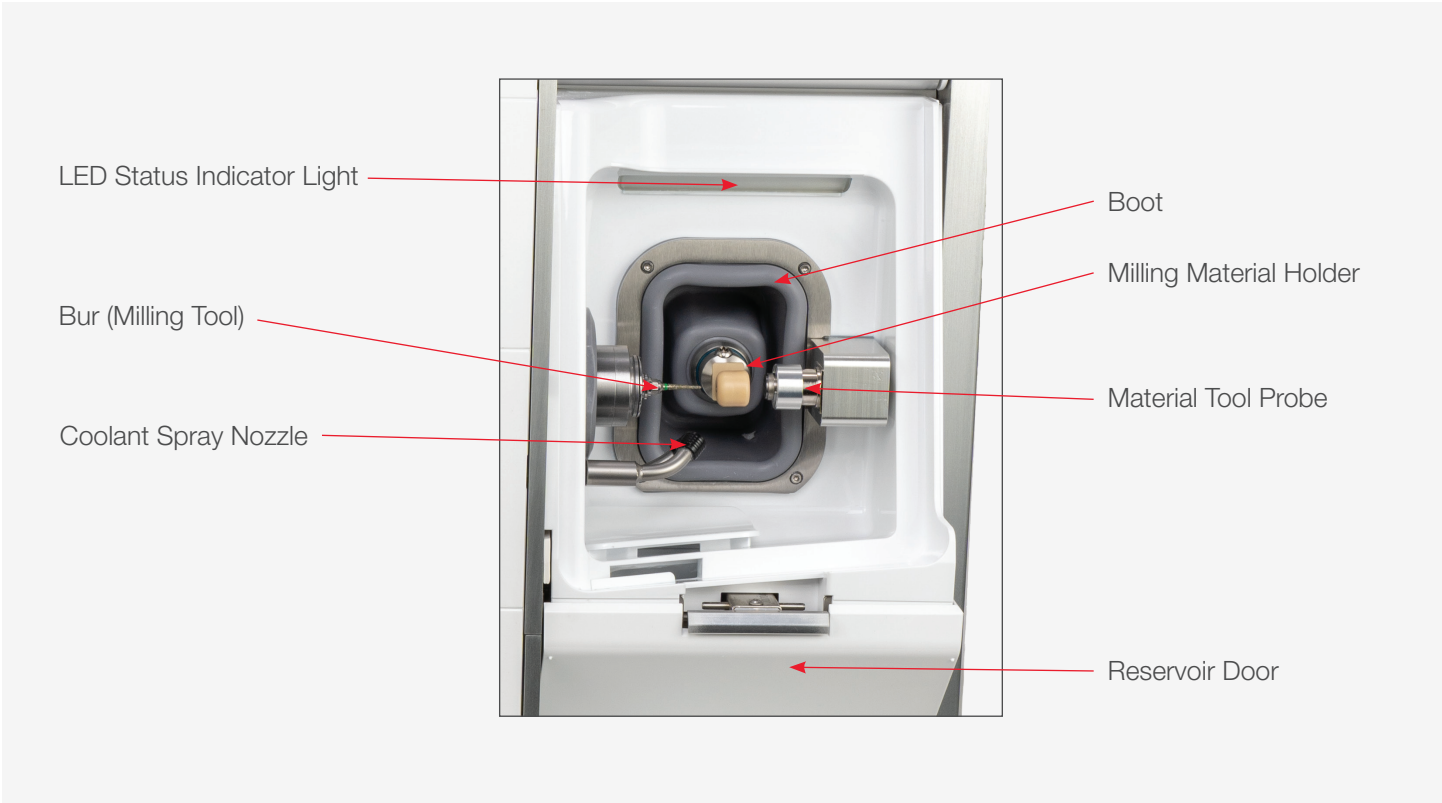
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# Components

## Getting to Know Your Mill

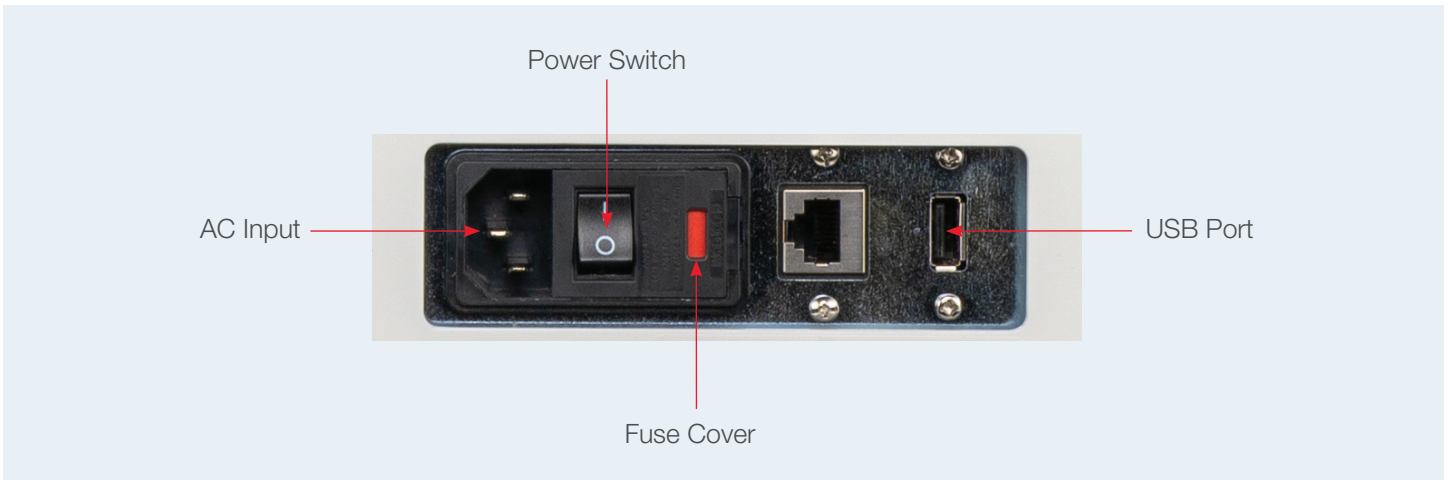




**Rear Panel Components**



## Power Entry Module and USB Port



## Initial Setup

- 1 Using two or more people, place the mill on a sturdy table, desk or countertop capable of supporting 150 lbs. Make sure the mill has at least a four-inch clearance on all sides.  
**⚠ To prevent injury, two or more people should lift and place the mill in its location.**
- 2 Set up the computer components: monitor, keyboard and mouse close to the mill.
- 3 As a safety precaution, always connect the power cords for the mill, computer and monitor to easily accessible three-pronged grounded power outlets.  
**⚠ Make sure the power cord connections are accessible at all times so disconnections can be made during an emergency.**
- 4 Connect the computer to the mill with the USB cable.
- 5 Make the coolant using the directions in the Preparing Coolant section on page 9. (Coolant warning and hazard information are in the Routine Maintenance section of these instructions on page 9.)
- 6 Pour the prepared coolant into the reservoir to the MAX fill line (1500 mL) on the right side of the reservoir.
- 7 Slide the reservoir into the mill until it clicks into the locked position with the reservoir door completely closed.
- 8 Turn on the computer and the mill. The CloudPoint® Mill Control Panel will open onto the computer screen.
- 9 Click "CHANGE TOOL."
- 10 Open the mill door, remove the collet pin from the spindle (collet), and save the collet pin.  
**⚠ Keep a bur (tool) or collet pin in the spindle at all times. Leaving the spindle empty can damage the collet.**
- 11 Insert the bur needed for the initial case, depending on material type, into the spindle and click "OK" on the computer screen.
- 12 If ready to mill, continue to the next section.
- 13 Allow the mill to go into a sleep mode when all jobs have been completed for the day. At the scheduled time, during off hours, the mill will "wake up" and warm up the spindle for about 15 minutes.

# LED Status Strip

The basin is lit by a color-coded LED light. This light allows users to see if the mill is operating properly, has malfunctioned, or needs a coolant change. The color definitions are as follows:

## LED Colors Reference Table

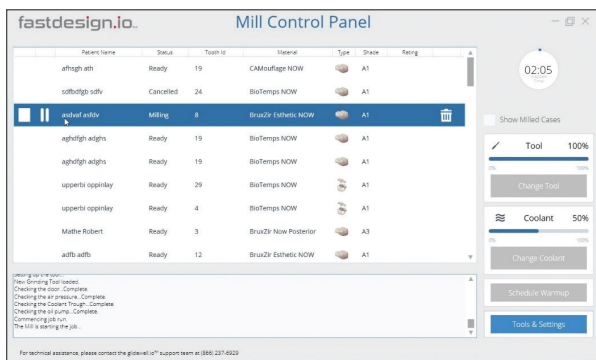
Color	Description
Bright White	Idle/Homed
Blue	Job Starting
Cyan	Job Halfway
Bright Green	Job Close to Completion
Green	Job Complete
White	Un-homed/Homing
Magenta	Coolant Change Needed
Red	Error
Yellow	Warning
No Light	Sleep/Off

Mill lit by Green LED light indicating job complete.



# Running the fastmill.io™ In-Office Unit

- 1 Turn on the computer and the mill. The CloudPoint Mill Control Panel will open onto the computer screen.
- 2 The mill will go through a self-check sequence, which will verify that the motion control and other systems are working correctly.
- 3 After the fastdesign.io™ Software sends the patient cases to the Mill Control Panel, the cases will download onto the computer screen. Select a patient case and click the play button next to the patient name.

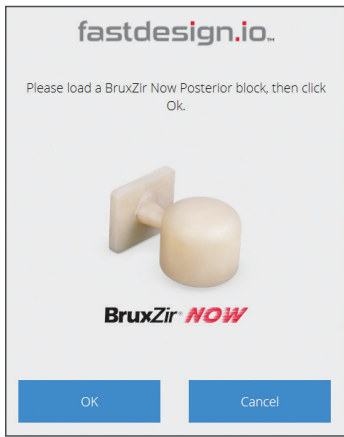


## Loading a Milling Material

- 4 At the material prompt, load the material selected for the case.
  - a) Open the mill door.
  - b) Insert the mandrel into the milling material holder with the dimple in the mandrel facing up.

**⚠ To prevent punctures or tears in the area behind the milling material holder (boot), do not push to torque driver into the boot when tightening/loosening the retaining screw.**
- 5 Tighten the retaining screw with the torque driver until the handle clicks.
 

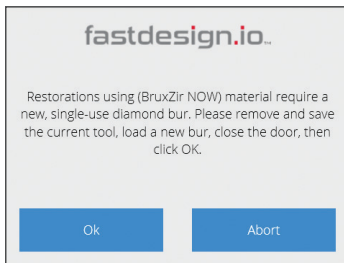
**⚠ DO NOT overtighten the retaining screw.**
- 6 Confirm that the correct material is loaded and click "OK."



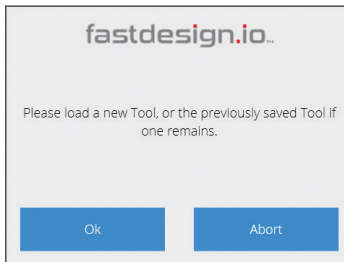
**NOTE about initial setup and run information: If prompted to change the bur (tool) after the collet pin was replaced with a new bur, click “No” and go to Step 9 in this section.**

- At the tool prompt, insert the new bur for the selected material into the spindle (collet) and click “OK” on the computer screen.

BruxZir® NOW Tool Prompt



Composite Tool Prompt



- Close the mill door.

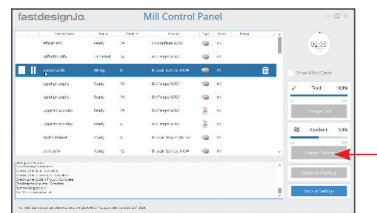
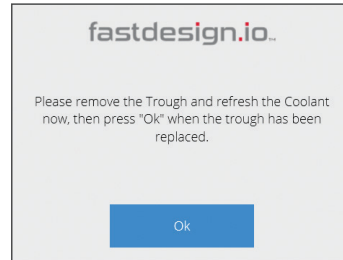
**NOTE:** BruxZir NOW burs are for single use milling. The mill will prompt you to change out the bur whenever the selected milling material is BruxZir NOW.

- Milling will begin automatically after the door is closed.

**⚠ To prevent injury, keep hands out of milling chamber while the spindle is running.**

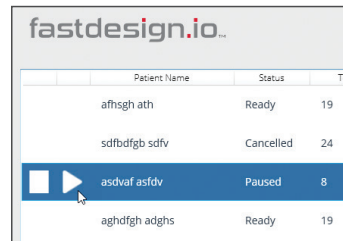
- While milling, the timer on the top right corner will indicate how much time has passed. The blue outer ring of the timer indicates how much longer the process will take to complete.

- At the coolant prompt, click “CHANGE COOLANT” on the Mill Control Panel and follow the coolant instructions in the Maintenance section of this guide.



- The process can be paused at any time by clicking the pause button left of the selected case.

- After pausing, press the play button to continue milling or press the abort button to cancel the job. (The white square button, next to the play button, is the abort button.)

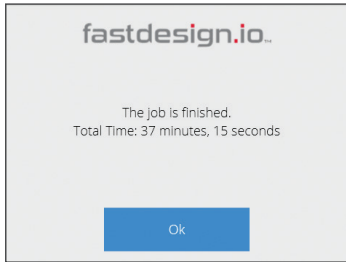


Left Corner of Mill Control Panel



After the abort button is pushed, confirm job cancellation by pressing “YES” after the prompt.

- When the job is finished, click “OK”, then use the torque driver to loosen the retaining screw holding the material and remove the restoration.



- Finish the restoration according to the instructions for the material.
- At the end of the day, confirm that a bur or collet is in the spindle (collet). The mill will go into sleep mode after office hours. At the scheduled time, off hours, the mill will “wake up” and warm up the spindle for about 15 minutes.

**⚠ Keep a bur or collet pin in the spindle at all times. Leaving the spindle empty can damage the collet.**

## General Operations

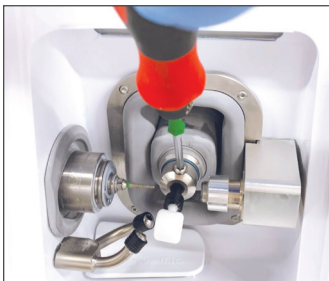
### Loading Material

- After pressing the play button, the mill will prompt you to confirm that the correct material is loaded for the particular case.
- Open the mill door and insert the mandrel into the material holder with the dimple facing up.



**⚠ To prevent tears or punctures in the area behind the material holder (boot), do not push the torque driver into the boot when tightening/loosening the retaining screw.**

- Tighten the retaining screw with the provided torque driver until the handle clicks. **DO NOT** over tighten the retaining screw.



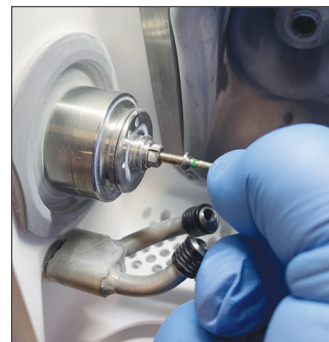
- Confirm that the correct material is loaded and click “OK.”



**NOTE:** BruxZir NOW burs are for single-use milling. The mill will prompt you to change out the bur whenever the selected milling material is BruxZir NOW.

### Replacing a Bur (Tool) and Bur Life

- Click “CHANGE TOOL.”
- Open the mill door and remove the current bur.
- Insert the new bur for the selected material into the spindle (collet) and click “OK” on the Mill Control Panel.



- Close the mill door.



Materials	Tool Replacement Schedule
Sintered Zirconia (BruxZir NOW, BruxZir Esthetic NOW)	After Every Restoration (BruxZir NOW is shipped with a green-striped BruxZir NOW tool for each block)
Glass Ceramics (Obsidian®)	After 5 Restorations
Polymer, Composite or Hybrid (CAMouflage NOW®, BioTemps® NOW)	After 5 Restorations

**⚠ Keep a bur or the collet pin in the spindle (collet) at all times. Leaving the spindle (collet) empty can damage the spindle (collet).**

**NOTE:** The CloudPoint Mill Control Panel software will prompt tool changes.

## Routine Maintenance

### Coolant

Glidewell Dental Mill Coolant Concentrate, also known as AmberCut™ 389K, is a synthetic machining coolant concentrate. The prepared coolant used in the mill does not contain any significant hazardous materials at a dilution of 4.8%–6.3%. Nevertheless, during the dilution process and the handling of used coolant, safety glasses and gloves should be worn. Contact the manufacturer of AmberCut 389K to obtain the Safety Data Sheet (SDS).

### Coolant Concentrate Hazard and Warning Information



Eye and Skin Irritant

### Hazard Identification and First Aid Measures

- EYES** – Contact with eyes may cause moderate eye irritation. Rinse eyes with large quantities of water if eyes become irritated.
- SKIN** – Prolonged or repeated exposure to the skin may cause irritation. Rinse skin with large quantities of water if skin becomes irritated.
- INHALATION** – The coolant is not an inhalation hazard under normal conditions. If respiratory irritation does occur, move the person into a well-ventilated environment or into the fresh air.
- INGESTION** – Ingestion may cause stomachache, nausea, diarrhea, vomiting, and headaches. If ingestion occurs, dilute stomach contents with water and get medical attention. Do not induce vomiting.



### Preparing Coolant

Make 1500 mL of coolant in the provided fastmill.io pitcher. With eye protection and gloves on, add 95 mL of Glidewell Dental Coolant Concentrate to the 95 mL fill line, then fill with distilled or reverse osmosis water to the 1500 mL fill line and mix. Pour the prepared coolant into the trough to the MAX fill line (1500 mL) on the right side of the trough.

## Cleaning and Refilling the Coolant Reservoir

The Mill Control Panel and the Magenta LED indicator light will prompt coolant changes when the coolant life has expired. Click “CHANGE COOLANT” in order to replace the coolant more often.

**⚠ Sharp material particles may be present in the basin, filters or reservoir. Wear safety glasses and gloves for protection.**

- 1 With the mill on, click “CHANGE COOLANT” on the Mill Control Panel. The reservoir will be released.
- 2 Open the reservoir door, and carefully pull out the reservoir.
- 3 Remove and rinse the main filter, splash guard, and the coolant filter cover with water. Without unplugging the internal filter, empty and thoroughly rinse the reservoir and internal filter.

**⚠ Do not unplug the internal filter.**



- 4 Place the internal filter, with the curved spring up, back into the reservoir.
- 5 Place the main filter on top of the reservoir. Then, make coolant using the directions in the Preparing Coolant section. Fill the reservoir with 1500 mL of fresh coolant.

**⚠ Do not place the reservoir on top of the mill when refilling with prepared coolant.**

- 6 Carefully reinsert the reservoir into the mill until it clicks into the locked position with the reservoir door completely closed.



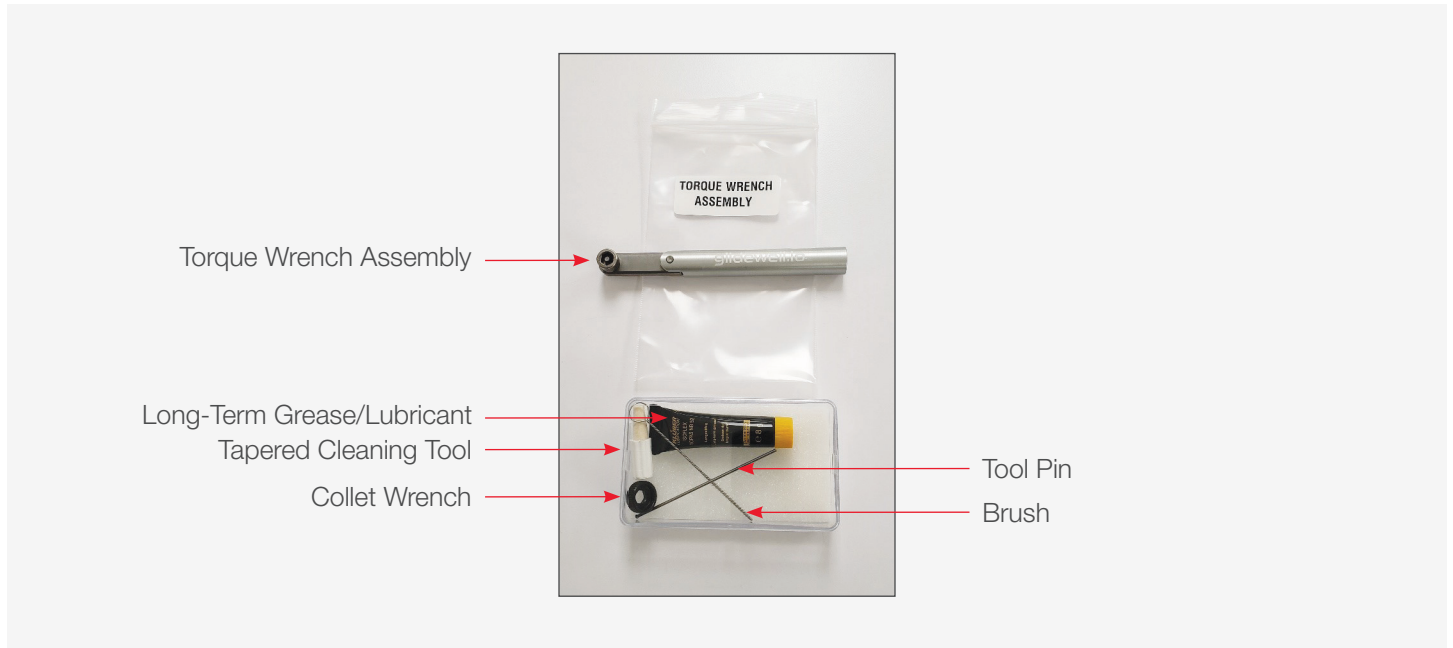
## Cleaning the fastmill.io In-Office Unit

Clean the mill on a weekly basis.

- Clean external surfaces with a clean lint-free cloth or paper towel and water.
- Clean the internal surfaces of the machining chamber.
  - a) Door – Wipe down the inside of the door using a clean lint-free cloth or paper towel and water.
  - b) Milling area – With a spray bottle of water and a toothbrush, spray and brush all surfaces to prevent excess buildup. Wipe down with a clean lint-free cloth or paper towel and water.
  - c) Basin – With gloves on, carefully remove glass fragments from the drain holes and rinse the basin thoroughly.

## Maintaining the Spindle

Using the Spindle Maintenance Kit, clean the spindle collet monthly or when the spindle collet is stuck in the shaft.



**1** Click “CHANGE TOOL”, then click “OK” to “Please load a new Grinding Tool.” to lock the spindle shaft and release the collet.

**2** Using the torque wrench, place wrench onto the hex at the end of the collet, loosen the collet from the shaft.



**3** Once loosened, remove the tool and proceed to remove the collet by hand.

**4** If tool is broken and inside the collet, use the tool pin to push the tool out from the back of the collet.



**5** Wipe the collet surface clean.

**⚠ To prevent skin irritation, wear gloves during cleaning and lubricant application. Contact manufacturer to obtain the Safety Data Sheet (SDS).**

**6** Insert the brush into the tool end of the collet; brush the inside while turning the collet.



**7** Brush the 3 slits on the outside of the collet.

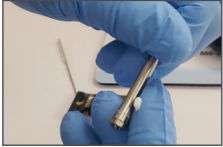
**8** Insert the taper cleaning tool into the tapered spindle shaft; apply light pressure while rotating the tool to clean the shaft.



- 9 Place a small dot of lubricant on the forefinger.



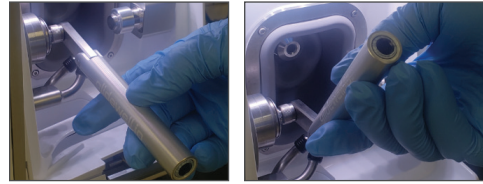
- 10 Apply the lubricant to the collet and smear it all over the outside of the collet.



- 11 Reinstall the collet into the spindle shaft by hand. Gently twist the collet until the collet stops turning in the shaft.



- 12 Tighten the collet using the included torque wrench. **Always use the torque wrench to avoid over-tightening the collet.**



- 13 Once the collet is set, click "OK" to "Please load a new Grinding Tool." The collet will lock onto the tool.

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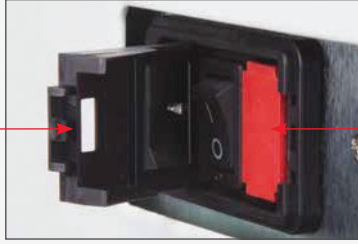
## Removing/Replacing the Fuse

- 1 Disconnect the power cord from the Power Entry Module.
- 2 On the right edge of the Power Entry Module, near the red rectangle, pull the black fuse cover up.
- 3 With a screwdriver, hook either the bottom or top of the red fuse holder and twist the screwdriver tip to draw the red fuse holder out of the Power Entry Module. Once the fuse holder is partially out, take note of the position the fuse holder is in, and then pull the fuse holder completely out of the Power Entry Module.

**NOTE:** Be careful when removing the fuse.

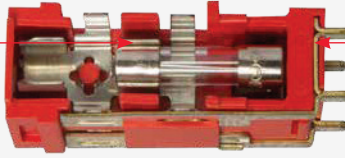
- 4 Before removing the broken fuse from the red fuse holder, take note of the position of the fuse in its holder.
- 5 Remove the fuse from the red fuse holder by using a small screwdriver to hook the metal end of the fuse and lift it up and out of the holder.
- 6 Place the new fuse in the same position as the broken fuse.
- 7 Place the red fuse holder back into its original position in the Power Entry Module.
- 8 Close the black cover of the Power Entry Module.

Black Fuse Cover



Fuse Holder

Fuse



Red Fuse Holder

## Repair

Each milling system has been manufactured and calibrated to specifications. There are no internal components that are serviceable or repairable by the customer. Please do not attempt to disassemble any part of the system. Any such action may void the product warranty. In the event of a product failure, please call your Technical Support Specialist.

## Notes

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# Troubleshooting Guide

Symptom	Possible Cause	Resolution
Unable to turn on unit	Power switch at the AC inlet is off (O)	Switch on AC power at the rear panel
	AC cord not inserted correctly at rear panel or outlet	Reinsert power cord and check for power at the AC outlet
	Blown fuse at AC supply	Replace the AC fuse with the correct fuse (see System Specifications)
Very high-pitched whine coming from spindle, especially when tool is not in contact with material	Spindle bearings worn	Contact Customer Technical Support at 866-237-6929 or <a href="mailto:fastsupport@glidewell.com">fastsupport@glidewell.com</a>
Repeated bur breakage and/or broken blocks	Coolant stream not directed at bur	Visually check to verify coolant is striking bur along length; if not, contact Customer Technical Support at 866-237-6929 or <a href="mailto:fastsupport@glidewell.com">fastsupport@glidewell.com</a>
	Coolant system not pumping correct amount	Verify coolant stream is adequate; if not, contact Customer Technical Support at 866-237-6929 or <a href="mailto:fastsupport@glidewell.com">fastsupport@glidewell.com</a>
Failure of machine during initialization routine; display of error	Motion control failure	Contact Customer Technical Support at 866-237-6929 or <a href="mailto:fastsupport@glidewell.com">fastsupport@glidewell.com</a>
Restoration excessively in or out of occlusion	Failure of tool probe	Contact Customer Technical Support at 866-237-6929 or <a href="mailto:fastsupport@glidewell.com">fastsupport@glidewell.com</a>
	Tool probe out of calibration	Contact Customer Technical Support at 866-237-6929 or <a href="mailto:fastsupport@glidewell.com">fastsupport@glidewell.com</a>
Coolant reservoir will not lock into position	Locking latch in “locked” position	Press reservoir release button and reinsert reservoir
Coolant reservoir locked into place	Solenoid is not working	Press the lever inside the rear panel
Collet nut is removed, but collet remains in spindle	Collet nut overtightened	Gently tap collet with nonmetallic item to break it free from the spindle

## Symbols Glossary

Symbol	Reference No. EN ISO 15233-1, Section	Title – Symbol Description
	Sec. 5.1.6	Catalogue Number – Indicates the manufacturer’s catalogue number so that the medical device can be identified.
	Sec. 5.4.3	Consult Instructions For Use – Indicates the need for user to consult the instructions for use.
	Sec. 5.4.4	Caution – Indicates the user needs to consult the instructions for use for important cautionary information such as warnings and precautions.
	Sec. 5.1.1	Manufacturer – Indicates the medical device manufacturer.
Symbol	Reference Canadian and US Certification mark	Title – Symbol Description
	N/A	Indicates that the product was tested and has met the certification requirements for electrical, plumbing and/or mechanical products.
Symbol	Reference No. BS EN 50419:2006	Title – Symbol Description
	Figure 1 Section 4.2	Separate collection for waste of electrical and electronic equipment. Do not dispose of battery in municipal waste. The symbol indicates separate collection for battery is required.
Symbol	Reference No. 29 CFR 1910.1200 – Appendix C, Section	Title – Symbol Description
	Sec. C.2.3.2, Figure C.1 – Hazard Symbols and Classes	Irritant – Indicates product contact/inhalation will irritate eyes, skin, or respiratory tract.

## System Specifications

<b>Power Input Voltage</b>	120V
<b>Power Input Frequency</b>	60 Hz
<b>Max Power</b>	350-450W
<b>Power Input Fuse</b>	6.0A 250V
<b>Operating Temperature Range</b>	18 °C to 32 °C (Prior to operation, stabilize for 1 hour at operating temperature after cold storage.)
<b>Storage Temperature Range</b>	-18 °C to 60 °C
<b>Operating and Storage Humidity Range</b>	0% to 85% (Non-Condensing Relative Humidity)
<b>Water Ingress</b>	Non-immersion with exception of machining area, damp wipe only on the outside
<b>Weight</b>	≤ 115 lbs.
<b>Dimensions (W,D)</b>	18 inches x 18 inches

# fastmill.io™

866-237-6929

[fastsupport@glidewell.com](mailto:fastsupport@glidewell.com)

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*Prismatic Dentalcraft, Inc.*  
2144 Michelson Drive  
Irvine, CA 92612, USA