

# USER MANUAL

fastmill.io™

*In-Office Unit*



**GLIDEWELL DENTAL**



# System Components

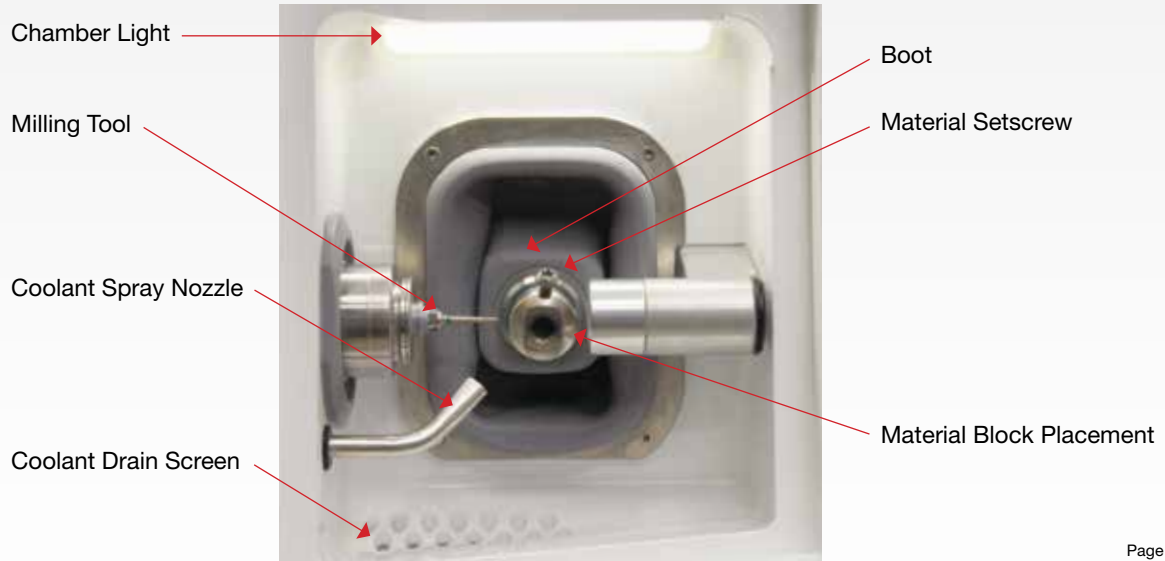
Getting to know your mill



Machining Chamber  
Door Push-Button

Trough Door  
Push-Button

Trough Door



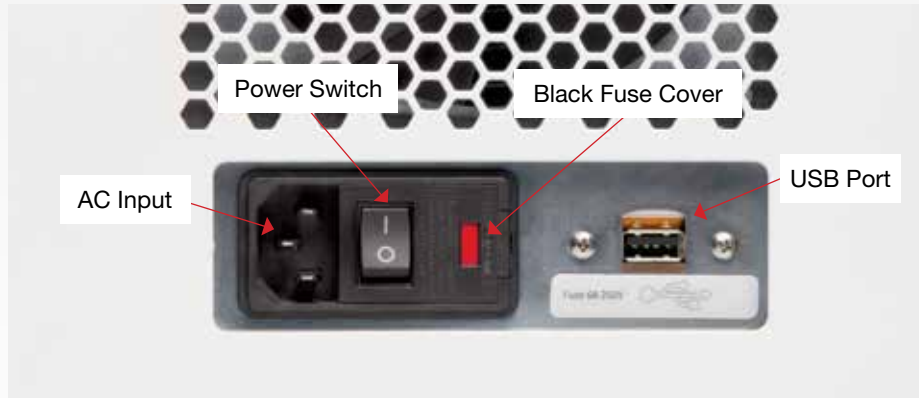
Rear Panel Components



Technical Plate

Trough Release  
Lever

Fan



# Initial Setup

## 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.

**WARNING: 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.

**WARNING: 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 14. (Coolant warning and hazard information are in the Routine Maintenance and Operations section of these instructions.)

- 6 Pour the prepared coolant into the trough to the MAX fill line (1500 mL) on the right side of the trough.
- 7 Slide the trough into the mill until it clicks into the locked position with the trough 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 tool holder (collet), and **save the collet pin**.

**CAUTION: Keep a tool or collet pin in the tool holder at all times. Leaving the tool holder empty can damage the collet.**

- 11 Insert the tool needed for the initial case, depending on material type, into the tool holder and click “OK” on the computer screen.

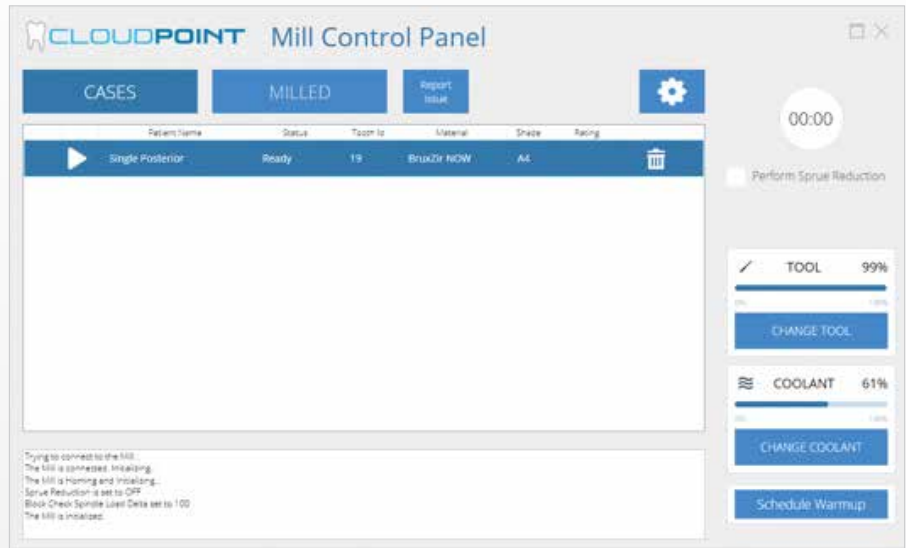
- 12 If ready to mill, continue to the next section.

- 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 fifteen minutes.

# Running the fastmill.io™ In-Office Unit

## Loading a Patient Case

- 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

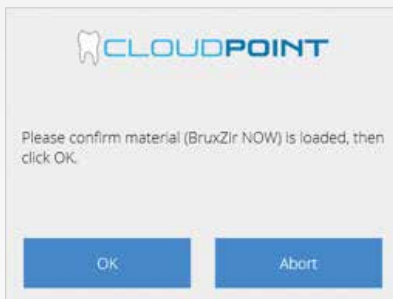
- 4 At the material prompt, load the material selected for the case.
  - a) Open the mill door.
  - b) Insert the mandrel into the material holder with the dimple in the mandrel facing up.

**CAUTION: To prevent punctures or tears in the area behind the 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.

**CAUTION: DO NOT over tighten the retaining screw.**

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

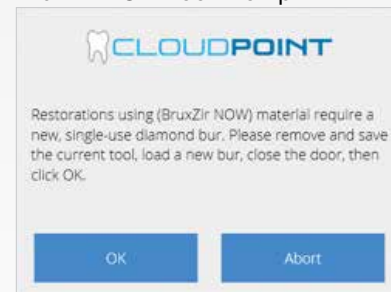


**NOTE about initial setup and run information:** If prompted to change the tool after the collet pin was replaced with a new tool, click “No” and go to Step 9 in this section.

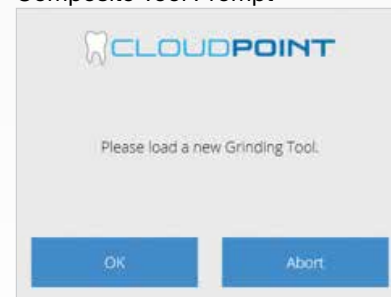
## Loading the Tool

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

BruxZir NOW Tool Prompt



Composite Tool Prompt



Loading the Tool (continued)

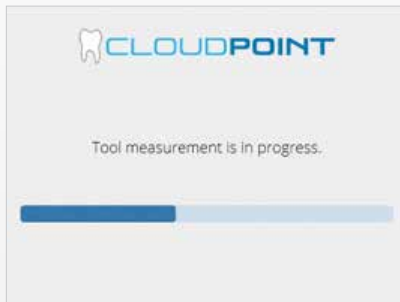
8 Close the mill door.

**NOTE:**

- BruxZIR® NOW tools are for single use milling. The mill will prompt you to change out the tool whenever the selected milling material is BruxZIR NOW.

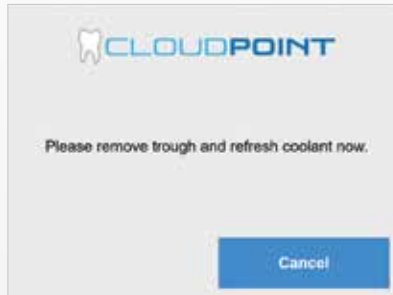
9 Milling will begin automatically after the door is closed.

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

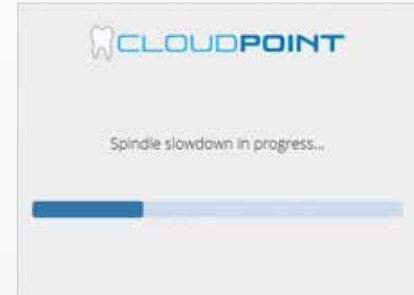


10 While milling, the timer on the top right corner will indicate how much time has passed. The blue outer ring of the timer indicates how much longer the process will take to complete.

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



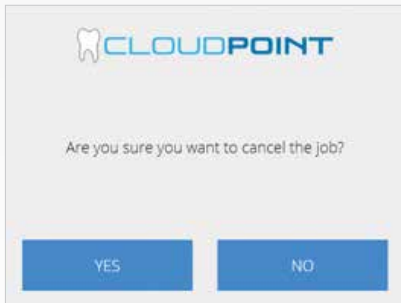
12 The process can be paused at any time by clicking the pause button left of the selected case.



- 13 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.

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



- 15 Finish the restoration according to the instructions for the material.

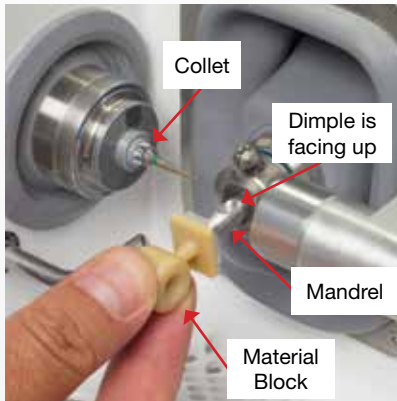
- 16 At the end of the day, confirm that a tool or collet is in the tool holder (collet). The mill will go into sleep mode after office hours. At the scheduled time, off hours, the mill will “wake up” and warm-up the spindle for about fifteen minutes.

**CAUTION: Keep a tool or collet pin in the tool holder at all times. Leaving the tool holder empty can damage the collet.**

# General Operations

## Loading Material

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

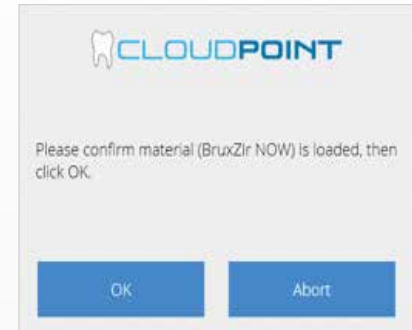


**WARNING:** To prevent tears or punctures in the area behind the material holder (boot), do not push the torque driver into the boot when tightening/loosening the retaining screw.

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



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



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

## Replacing a Tool and Tool Life

- 1 Click "CHANGE TOOL."
- 2 Open the mill door and remove the current tool.
- 3 Insert the new tool for the selected material into the tool holder (collet) and click "OK" on the Mill Control Panel.



- 4 Close the mill door.

Materials	Tool Replacement Schedule
Sintered Zirconia (BruxZir® 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

**CAUTION:** Keep a tool or the collet pin in the tool holder (collet) at all times. Leaving the tool holder (collet) empty can damage the tool holder (collet).

**NOTE:** The CloudPoint® 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

- a. EYES – Contact with eyes may cause moderate eye irritation. Rinse eyes with large quantities of water if eyes become irritated.
- b. SKIN – Prolonged or repeated exposure to the skin may cause irritation. Rinse skin with large quantities of water if skin becomes irritated.
- c. 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.
- d. 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 Trough

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

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

- 1 With the mill on, click “CHANGE COOLANT” on the Mill Control Panel. The trough will be released.
- 2 Open the trough door, and carefully pull out the trough.
- 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 trough and internal filter.

**CAUTION: Do not unplug the internal filter.**



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

**WARNING: Do not place the trough on top of the mill when refilling with prepared coolant.**

- 6 Carefully reinsert the trough into the mill until it clicks into the locked position with the trough 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 collet 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.
- 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.



**Step #2 – Loosen collet**



**Step #4 – Push tool out**



**Step #6 – Brush inside collet**



**Step #8 – Clean tapered spindle shaft**



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

- 9** Place a small dot of lubricant on the collet and smear it all over the outside of the collet.



**Step #9 – Lubricate collet**

**STOP** Do not over tighten the collet into the spindle shaft during reinstallation of the collet. Over tightening may damage the collet.

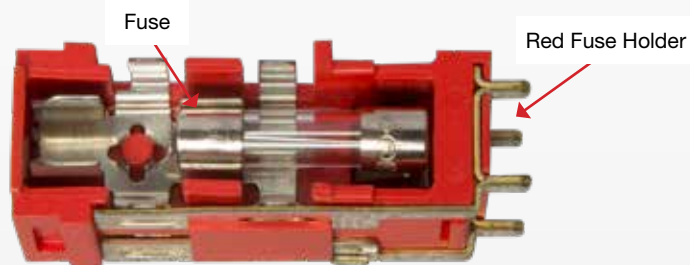
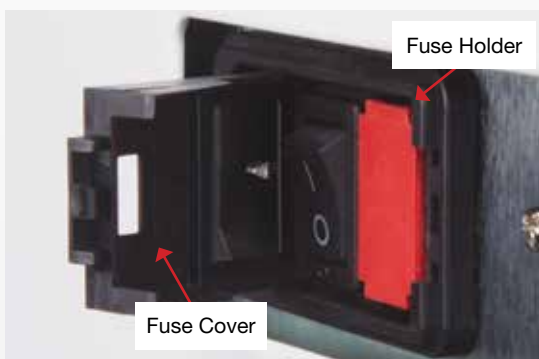
- 10** Reinstall the collet into the spindle shaft by hand. Gently twist the collet until the collet stops turning in the shaft.
- 11** Insert a tool and then tighten the collet, using the collet wrench, for a snug fit. Do not over tighten the collet into place.
- 12** Once the collet is tight, click “OK” to “Please load a new Grinding Tool.” The collet will lock onto the tool.

## 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 up the black fuse cover.
- 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.
- 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 that the broken fuse was in.
- 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.



## Repair

Each milling system has been manufactured and calibrated to specifications. There are no serviceable or repairable components within the system 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 you should experience a product failure, please call your Technical Support Specialist.

<b>Symptom</b>	<b>Possible Cause</b>	<b>Resolution</b>
No power to unit	Power switch at the AC inlet is off (0)	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	Call your Technical Support Specialist.
Repeated tool breakage and/or broken blocks	Coolant stream not directed at tool	Visually check to verify coolant is striking tool along length; if not, call your Technical Support Specialist.
	Coolant system not pumping correct amount	Verify coolant stream is adequate; if not, call your Technical Support Specialist.
Failure of machine during initialization routine, display of error	Motion control failure	Contact your Technical Support Specialist.
Restorations excessively in or out of occlusion	Failure of tool touch probe	Contact your Technical Support Specialist.
	Tool touch probe out of calibration	Contact your Technical Support Specialist.
Coolant trough will not lock into position	Locking latch in "locked" position	Press trough release button and reinsert trough.
Coolant trough locked in 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 non-metallic item to break it free from the spindle.



## 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

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