**Purpose**

To establish an operation procedure for the Exakt 312 band saw including diagrams, risk assessments, usage, maintenance, cleaning, and other fundamental knowledge for safe and reliable use for cutting bone specimens.

**Procedures**

**Emergency Shutdown**

* The emergency stop pushbutton is located at the top, above the blade speed knob and is used to stop the cutting band motor within approximately 4 seconds in case of danger. To start the saw after the emergency stop button has been depressed, rectify malfunction, pull out emergency stop button, press acknowledge button and start button. (see photo below)



**Emergency Stop Button**

**Risk Assessment and other Safety Notes**

* Always wear proper PPE including nitrile gloves, face shield or safety glasses, and gown.
* Wear tight fitting clothing and protect long hair to reduce the risk of entanglement in rotating band.
* Cuts may be caused on contact with the moving cutting band. Make sure you are standing firmly and the working area is clear.
* Keep the floor around the saw dry and clear of debris. Wear non slip shoes to reduce the risk of slipping.
* The doors covering the band have very powerful magnets. Do not grasp the edge of the door as this may cause crushing injuries. Individuals with pacemakers must keep away from the magnetic fields. Keep all data carriers or other electronic equipment away from the magnets as this may cause damage.
* The usage of accessories and spare parts that not been recommended by Exakt can impair the safety and function of the saw. Any warranty and/liability on the part of Exakt for damage caused by accessories and or spare parts that have not been recommended is excluded. Use only accessories or genuine parts from Exakt.
* Reduce the risk of shock: never place the saw in operation if the mains cable is damaged, protect the mains cable from heat, caustic materials and sharp edges, keep mains away from water, use a splash proof mains socket. Always have the mains cable replaced by a service engineer.
* **Tissue fresh for research or suspect of biological pathogens must be cut after the hours of 7pm on regular working days or on the weekends. Face masks must be worn and are located within the storage space with other PPE in frozen room 1D354.**

**Instrument Use**

* The Exakt 312 band saw may be used at any time except when the tissue is fresh for research or suspect of pathogens. In such cases, the tissue must be either cut after hours of 7pm during the work week or on the weekend.

**Operating Procedure**

**\*Please use proper PPE including safety glasses, gloves, gown and mask (if necessary) before using saw. Make sure no loose clothing or long hair is exposed as this will decrease the risk of entanglement. See risk assessment and safety notes before use.**

1. Turn on main power supply switch by rotating clockwise until clicks (circular switch on back of unit).
2. Press motor acknowledge button (blue button directly above main power supply). You will hear a click noise once the motor is engaged.
3. Turn on main water supply (white lever directly below grossing station 1D).
4. Turn on upper water supply (cooling water control) to cool and lubricate saw blade. There should be just enough water flowing down the blade to create a stream.
5. Turn on the lower water supply (flush water control) to wash blade off of debris before next revolution.
6. Adjust the clamping bolt knob for the top cutting band guide until the specimen just fits under blade bracket.
7. Adjust rip fence to desired cut.
8. Turn on green start button located on top right of unit.
9. Adjust cutting band speed to desired RPM’s (located directly below start button).
10. If necessary, turn on laser guide to help cut straight lines.
11. Push specimen at the slowest speed possible to ensure a clean and accurate cut. Let the blade do the work for you.
12. Once cutting is complete, push red stop button to disengage motor.
13. Turn off main power supply switch by rotating counter clockwise until clicks (circular switch on back of unit).
14. Clean all contaminated surfaces with Conflikt and rinse all fluid and debris with hand hose. See Maintenance section below. NOTE: Do not use bleach or bleach based solutions to clean saw.
15. Turn off main water supply (white lever directly below grossing station 1D).
16. Turn off both upper and lower water supplies.

**Note:** The operating manual and SOP are located above the saw in room UH1D354. The SOP can also be found in Master Control.

**Equipment Failure**

* If equipment failure is detected, contact: **Linda Durbin at Exakt Technologies Inc. 7002 N. Broadway Oklahoma City, OK 73116-9006, phone 405.848.5800 ext.101 or 800.866.7172, fax 405.848.7701 www.exaktusa.com<http://www.exaktusa.com/**

**Cleaning**

* Make sure the main power to the saw is in the off position before cleaning.
* General cleaning is to be performed after every use to prevent carry over and contamination. Clean all soiled surfaces using gauze and cleaning agents such as Conflikt or alcohol based cleansers. **Do not use bleach or acetone based cleaners** as this will ruin the metal surfaces.
* Thorough cleaning is to be done on a weekly basis along with general maintenance (see below). Clean all soiled surfaces using gauze and cleaning agents such as Conflikt or alcohol based cleansers. Open both top and bottom doors, and remove the white work tray. Clean, disinfect and rinse all debris away down the drain. Shut both doors and replace work tray.

**Maintenance and QC**

**\*The QC log is located on the wall, directly adjacent to the saw in frozen section room 1D354 and must be filled out every week.**

* **Weekly maintenance:** clean entire saw, check cooling water system and flush water system. Inspect blade, belts, pulleys and mains cable. Clean blade by cutting on whet stone.
* **Six month maintenance:** cooling water hose replacement if needed. Check that saw is level and inspect mains cable.
* **Annual maintenance:** change blade if necessary. Replace belts and check electrical system and safety circuit (to be done by biomed or service engineer).

**Flowcharts**

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**References**

1. Exakt Operating Instructions, Diamond Pathology Saw, Exakt 312, Edition 10\_2010-38891EN-900-AB.