

## PATTERSON DIAMOND INSTRUMENTS AND DISCS

Patterson Diamond Instruments and Discs are available in Sterile and Non-Sterile models under various trade names with numerous head diameters and working lengths. The devices are reusable and are sterilized using steam sterilization in a gravity or prevacuum cycle.

### DESCRIPTION


The Patterson Diamond Instruments and Discs family includes Operative Diamond Instruments, Laboratory Diamond Instruments and Diamond Discs. A DIAMOND dental instrument or disc is a rotary abrading device made of stainless steel that is coated with diamond particles on the working end, and is designed to fit into a dental handpiece. Patterson Diamond Instruments and Discs are reusable devices.

### INTENDED USE

Patterson Diamond Instruments and Discs fit into a dental handpiece, which provides the rotation, allowing the user to abrade hard structures in the mouth, e.g., teeth or bone. Patterson Diamond Instruments and Discs can also be used to abrade hard metals, plastics, porcelains, and similar materials.

### WARNINGS AND PRECAUTIONS

Warning: Attention should be paid to the speed of work (RPM)

- Always refer to the product packaging for the Maximum RPM
- Operating a bur with too high of an RPM may generate undesirable heat
- Operating a bur with too high of an RPM may cause the bur to fail
- Diamond Instruments and Discs must be thoroughly cleaned and steam sterilized prior to the first use and each subsequent reuse.
- Diamond Instruments and Discs labeled “Sterile” require no further action prior to first use but must be thoroughly cleaned and steam sterilized prior to each subsequent reuse.
-  If the packaging for “Sterile” labeled devices is opened or damaged, the device must be thoroughly cleaned and steam sterilized prior to use and each subsequent reuse.
- Do not use chemical or dry heat to sterilize Patterson Diamond Instruments or Discs, as these processes have not been validated for use.
- Do not use worn-out or dull burs.
- Do not apply excessive pressure on the bur as this could cause undesirable heat or may cause the bur to fail.
- Avoid removing the bur at too sharp an angle to avoid leverage and breakage.
- Carefully read package labels to ensure use of the appropriate device.
- Ensure the bur is fully seated and securely gripped in the handpiece collet prior to use.
- Move the bur continuously when in use to avoid localized heating and/or damage to the bur.
- Maintain handpieces in good working condition to ensure maximum effectiveness of the device.
- Use a rubber dental dam while using Diamond Instruments and Discs to avoid possible aspiration or swallowing.
- Always wear gloves when handling contaminated instruments.
- Eye protection must be worn to protect against ejected particles.
- Surgical masks must be worn to avoid inhalation of any aerosol or dust generated.
- Patterson Bur Blocks used to hold the devices for storage and steam sterilization are not intended to maintain sterility of the device.

## **GENERAL INSTRUCTIONS**

1. The device is to be used on the instruction of, or by a dentist or other licensed practitioner.
2. Clean and sterilize non-sterile burs in accordance with the validated procedures provided below prior to first use and prior to each reuse.
3. Do not force bur into the handpiece. In case of difficult access, check both handpiece turbine and bur and refer to handpiece instructions for troubleshooting.

## **CLEANING AND STERILIZATION INSTRUCTIONS**

### **Scope**

These instructions are applicable to all Patterson Diamond Dental Burs and Discs. They are applicable before initial use and after each subsequent use. Diamond Instruments and Discs are provided mechanically clean but are not sterile (unless labeled “STERILE”). Therefore, Diamond Instruments and Discs should be sterilized before first use.

### **Warnings**

1. Cleaning agents with chlorine or chloride as the active ingredient are corrosive to stainless steel and must not be used. Cleaning agents with neutral pH are recommended.
2. Do not use Cold Sterilizing Methods for the sterilization of Diamond Instruments or Discs. These agents often contain strong oxidizing chemicals that may attack the substrate that bonds the diamond particles to the steel blanks.

### **Reprocessing Limitations**

The end of life is determined by wear and damage in use and Diamond Instruments and Discs should be inspected for defects (i.e., broken tips, missing diamond particles, etc.) during the cleaning process.

### **Point of Use**

Delay in reprocessing must be kept to a minimum to avoid contaminants drying, thereby making cleaning more difficult.

### **Containment/Transportation**

Diamond Instruments and Discs can be transported wet or dry and should be protected from damage.

If transported wet, there is an increased chance of staining or corrosion. Prolonged storage in disinfectant solutions may result in degradation of the product and must be avoided.

### **Manual Cleaning Procedure**

If hand cleaning is the only available option, Diamond Instruments and Discs should be cleaned in a sink reserved for cleaning instruments.

Optional step: Insert the Diamond Instrument into a handpiece and operate at the Maximum RPM. Insert the Diamond Instrument head fully into a wet diamond cleaning stone for at least 2 seconds. Remove Diamond Instrument from handpiece.

Rinse the Diamond Instrument or Disc (and dedicated instrument block, if applicable) under cool running water for at least one (1) minute.

Prepare a fresh bath of neutral-pH cleaning solution. Follow the agent’s manufacturer’s instructions. Immerse the Diamond Instrument or Disc (and instrument block) and soak for at least ten (10) minutes.

After soaking, and keeping it immersed, brush thoroughly away from the body using the neutral cleaning agent for at least one (1) minute. Care should be taken to avoid spreading contaminants by spraying or splashing during the brushing process. Use wire brushes with caution as brass particles may result in galvanic corrosion and steel particles may cause discoloration of stainless steel.

Special care should be taken to clean crevices and other hard-to-reach areas thoroughly. Visually inspect to confirm the removal of debris. Repeat the cycle if needed.

Thoroughly rinse the Diamond Instrument or Disc (and instrument block) under running warm water for at least one (1) minute and until visibly clean.

Dry the device using a non-shedding wipe or clean compressed air.

### Automated Cleaning Procedure

Rinse the articles under running water to remove excess contamination.

Transfer the test articles into the washer for processing.

Stage	Recirculation Time (minutes)	Temperature	Detergent Type and Concentration (If Applicable)
Pre-wash	02:00	Cold tap water	N/A
Wash 1	02:00	43°C (109.4° F) Tap water	Enzymatic or Alkaline detergent prepared at the manufacturer's recommendation
Neutralization Wash	02:00	43°C (109.4° F) Tap water	Neutral pH detergent prepared at the manufacturer's recommendation
Rinse 1	01:00	43°C (109.4° F) Tap water	N/A
PURE Rinse	01:00	43°C (109.4° F) RO/DI water	N/A
Dry Time	10:00	115°C (239° F)	N/A

### Ultrasonic Cleaning Procedure

Prepare a fresh pH-neutral cleaning solution; place the Diamond Instrument or Disc in the dedicated instrument block (if applicable) and then place in a sonication unit. Follow the agent manufacturer's instructions for correct concentration, exposure time, temperature, and water quality. Completely submerge the device in the cleaning solution and sonicate for at least fifteen (15) minutes.

Perform a final thorough rinse of the device and instrument block (if applicable) under running warm tap water for at least one (1) minute.

Visually inspect to confirm the removal of debris. Repeat the cycle if needed. Dry the device using a non-shedding wipe or clean compressed air.

### Inspection Testing

1. Carefully inspect each device to ensure that all debris has been removed.
2. Visually inspect the device for damage/wear that would prevent proper operation.
  - a. Do not use if the tip is broken.
  - b. Do not use if there are missing or worn diamond particles.
  - c. Do not use if there is evidence of corrosion.

### Packaging

Single: Pack the Diamond Instruments or Discs in pouches validated for sterilization.















In Sets: Place the Diamond Instruments or Discs in the dedicated instrument block.

### STORAGE

The Diamond Instruments or Discs should be stored in the sterilization pouch (or instrument block) until required.

### ADDITIONAL INFORMATION

These processes have been validated as being capable of preparing Diamond Instruments and Discs for reuse. Any deviation from these instructions should be properly validated for effectiveness and potential adverse results.

 Batch Code	 Use by Date	 Caution
 Catalog Number	 Do not re-use	 Recyclable
 Manufacturer	 Sterilized using irradiation	 Medical Device
 Date of Manufacture	 Autoclave at specific temperature	 Translation
 Operating Instructions	 Do not use if package is damaged	

Manufactured for:  
Patterson Dental Supply, Inc.  
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