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# **6814 AUTOEXTRACTOR<sup>TM</sup>**

**(FOR 6751 AND 6801 FREEZER/MILL<sup>®</sup> VIALS)**

# **OPERATING MANUAL**

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## **1.0 INTRODUCTION**

The 6814 AUTOEXTRACTOR is a motorized electrical accessory for quick and safe removal of end-plugs from chilled Freezer/Mill vials. The 6814 AUTOEXTRACTOR can open the large 6801 Grinding Vials for the 6800 and 6850 Freezer/Mills, as well as the smaller 6751 Grinding Vials that are used singly in the 6750 Freezer/Mill and four at a time in the 6800 and 6850 Freezer/Mills. Out of the box, the AUTOEXTRACTOR is set up for 6801 vials, but it includes an easily installed insert for handling 6751 vials. The 6814 AUTOEXTRACTOR can also remove the end-plug from the 6753 Microvial Set holders that contains three 6753V Microvials, but the 6814 cannot remove end-plugs from the individual Microvials.

Operation of the 6814 AUTOEXTRACTOR is extremely simple, and will shorten and simplify the process of cleaning out the Freezer/Mill Grinding Vials. The 6814 quickly and effortlessly removes the end plugs from each vial, so the samples will not defrost too quickly and can be readily removed from the vial. The 6754 and 6804 Extractors included with the 6750 and 6850 Freezer/Mills are effective at this, but slower since they are manually operated. The motorized AUTOEXTRACTOR is easier and quicker to use, particularly when quantities of chilled vials need to be opened.

***CAUTION:*** *always use protective cryogenic gloves when handling chilled vials!*

### **Various Accessories mentioned in this manual**



**6754 Extractor**



**6801 Grinding Vial Set**



**6751 Grinding Vial Set**



**6804 Extractor**



**6753 Grinding Vial Set**



**6900 Cryogenic Gloves**

## **2.0 SPECIFICATIONS**

**Type of Unit:** Motorized Electrical Extractor for 6750 & 6850 Freezer/Mill Vials

**Operating Mechanism:** Motorized Reversible Screw

**Dimensions:** 4 7/8 in. (12.3 cm) wide x 7 1/8 in. (18.1 cm) deep x 14 3/8 in. (36.5 cm) high

**Weight:** 15 lbs. (6.75 Kg) Shipping Weight, 14 lbs (6.3 Kg) Unit Weight

**Capacity:** One 6801 or 6751 Grinding Vial

**Electrical Specifications:** CE Approved, available in 115V/60HZ or 230V/50HZ models

**Cord:** 115V 60HZ version, 3-prong grounded plug supplied.  
230V 50HZ version, 2-prong European plug supplied.

***NOTE: Operator is responsible for supplying alternate line cord/plug if required.***

**Fuse:** 8 Amp, Slow-Blow Fuse

**Safety Features:**

Intermittent activation rocker switch

**Motor:** Sub-fractional DC Motor

***NOTE: PLEASE DO NOT OPERATE THE 6814 AUTOEXTRACTOR UNTIL YOU HAVE READ THESE INSTRUCTIONS AND ARE FAMILIAR WITH ITS CONTROLS AND CLAMP MECHANISM.***

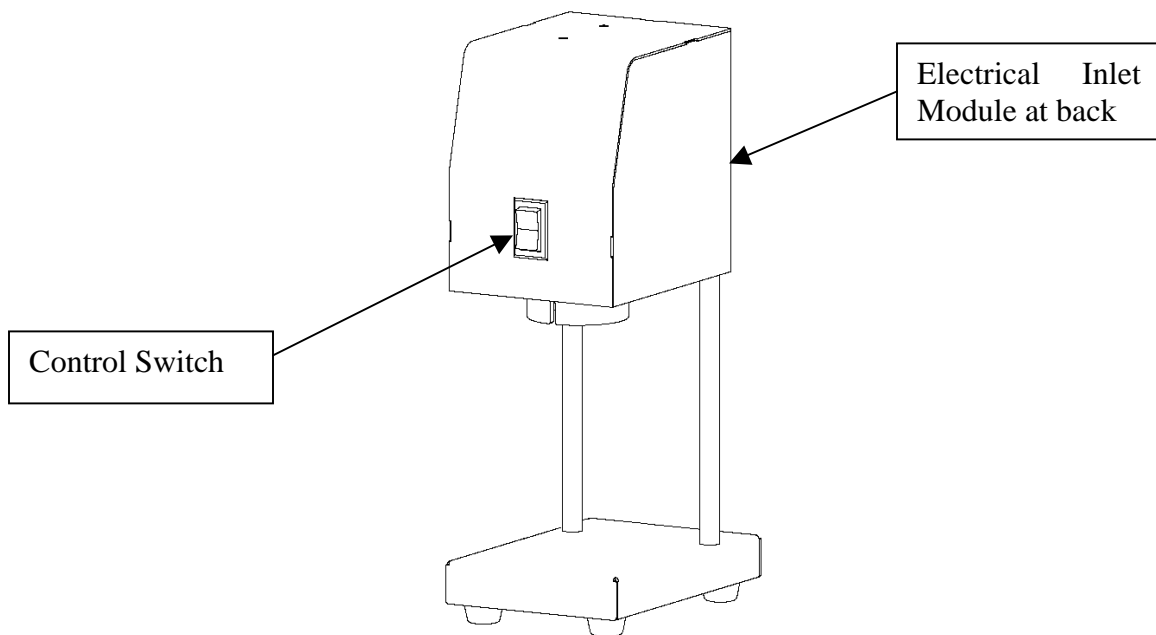
### **3.0 UNPACKING**

Carefully inspect the exterior of the packing box. Any visible damage should immediately be reported to the carrier. Remove all packing documents from the exterior of the box, and file in your records. Open the top of the shipping box. Remove the foamed-in-place packing material by lifting on the retaining plastic sheet. Remove the accessory pack and place nearby. Grasp the 6814 AUTOEXTRACTOR on both sides, and gently remove from the packing box. Place the unit on the bench-top where the mill is to stay. Visually check the machine for any damage that may have occurred during shipping.

Each new 6814 AUTOEXTRACTOR is set up for the large (6801) Grinding Vials but includes an insert for handling smaller (6751) Grinding Vials.

Grinding vials are necessary for processing samples in the 6750 or the 6800/6850 Freezer/Mill but must be purchased separately. The 6751 Vial, the 6752 Steel Center Section, the 6753 Microvial set, and the 6801 Vial set are shown and described in our printed catalog and they are also described on our web site ([www.spexcsp.com](http://www.spexcsp.com)). For a copy of our catalog, please call Customer Service at 1-800-522-7739 Ext. 465.

Inspect the accessory pack. Remove the Packing List and use it to check that there are no parts missing. If everything seems to be in proper order, then store the packaging materials, in case there is a need to return the unit for future service or repair.

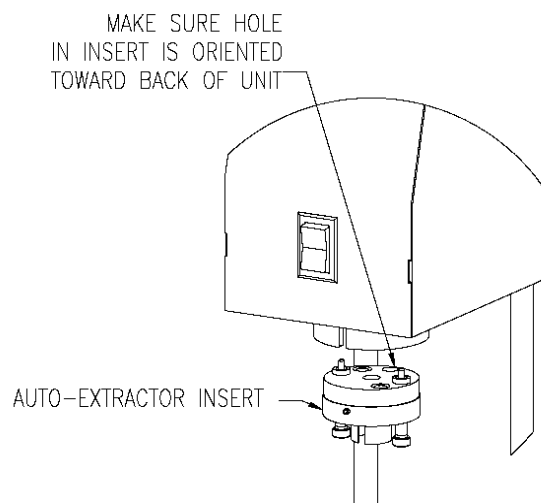


**6814 AUTOEXTRACTOR**

## **4.0 OPERATION**

The 6814 AUTOEXTRACTOR is available in two versions: the 6814-115 operates on 115 V, 60 Hz current and is equipped with a standard 3-prong grounded line cord. The 6814-230 operates on 230 V, 50 Hz current and is equipped with a CEE 7/7 2-prong plug. Under normal conditions the 6814 Extractor is unlikely to draw more than 0.5 amps.

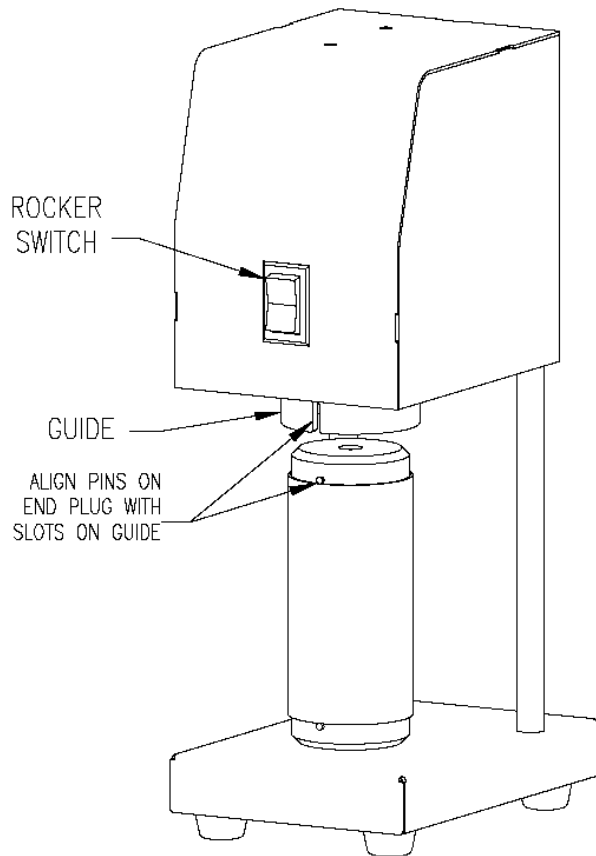
The 6814 AUTOEXTRACTOR is very easy to operate, but we recommend you learn how to use it with an unloaded, assembled vial at room temperature. As received, the 6814 is set up for the larger 6801 Freezer/Mill vials. If you will be using the 6814 for 6751 vials, it is necessary to install the 6751 Insert first. This Insert is supplied with every 6814, and fits inside the bell, around the screw. To install the 6751 Insert, rotate it until the hole in the top of the Insert is toward the back of the 6814 and the locating pin fits into that hole. Then secure the Insert with the two thumbscrews attached to it. To remove the 6751 Insert, back out the two thumbscrews.



**Fig. 1: Installing the Insert for 6751 vials**

Plug your 6814 AUTOEXTRACTOR into a power outlet and check to see that it runs. On the front is a rocker switch, marked “Remove” above the switch and “Release” below the switch. Press the switch in the “Remove” or down direction, and then the “Release” or up direction, and verify that the screw in the extractor bell turns when the switch is pressed. The rocker switch is spring-loaded to return to the central or off position when it is released.

The 6814 AUTOEXTRACTOR is used the same way as the 6754 and 6804 Extractors. First align the threaded end-plug of an assembled vial with the AUTOEXTRACTOR guide, so the end-plug pins line up with the slots in the guide, and the screw engages the threaded hole in the end-plug. Then the screw is turned to pull the end-plug out of the tube. In the AUTOEXTRACTOR the rocker switch is pressed to turn the screw: pressed down (“Remove”) to pull out the end-plug, and pressed up (“Release”) to let it go.



**Fig. 2: Operating the 6814 AUTOEXTRACTOR**

The following steps, will guide you as you operate the 6814 AUTOEXTRACTOR to open a chilled Freezer/Mill vial:

- 1) Wear cryogenic gloves to handle the chilled vial.
- 2) Bring the vial up against the AUTOEXTRACTOR guide.
- 3) Rotate the vial so the pins align with the slots in the bell, and push the vial end-plug gently up, against the screw. Do not let go of the vial.
- 4) Hold the rocker switch down (toward “Remove”) until the rotating screw pulls the end-plug out of the tube. **Release the switch as soon as the plug is out.** The vial can then be emptied.
- 5) To eject the end-plug still in the guide, position your gloved hand to catch the end-plug, and hold the rocker switch up (toward “Release”) until the end-plug drops out.

***CAUTION! Don't let the end-plug fall onto the AUTOEXTRACTOR base-plate and bounce or roll off the lab bench, but catch it when it drops from the guide. The 6801 end-plug weighs about 11 ounces (310 grams) and is heavy enough to cause damage to base plate, countertop, etc.***

## 5.0 MAINTENANCE

The 6814 AUTOEXTRACTOR has been designed to provide trouble-free operation over a long period of time. To assure proper performance, perhaps the most important factor is cleanliness. When the unit is at room temperature, any spilled powders or liquids should be wiped up immediately. The bell as well as the extractor insert section should be wiped clean with a damp cotton cloth after every days use. This should prevent the buildup of any powders, mold/mildew, or unsightly gunk over the life of the unit.

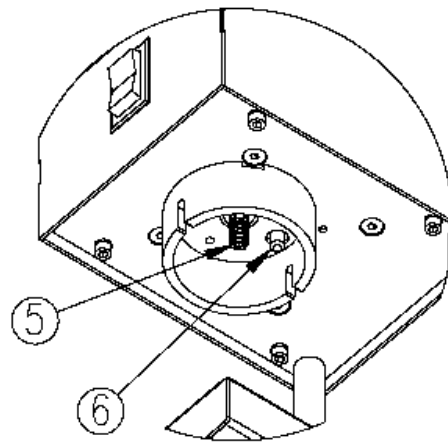
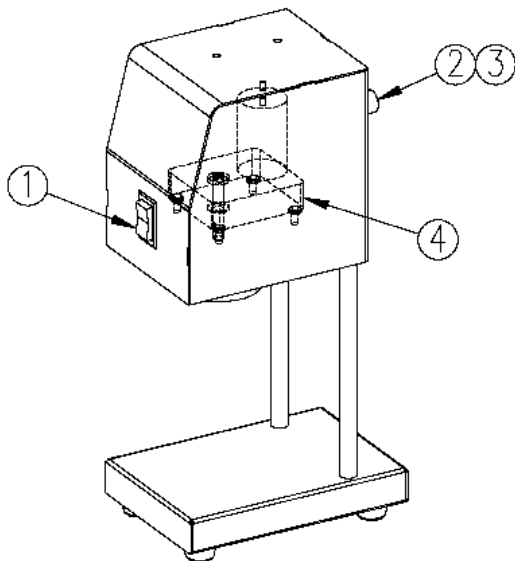
To maintain the exterior of the unit, first disconnect the AUTOEXTRACTOR. Then an occasional spraying and wiping down with a mild window cleaner or similar product will be sufficient.

In the rare case that you may need to service the 6814 AUTOEXTRACTOR, please call SPEX CertiPrep Customer Service for assistance.

## 6.0 PARTS LIST

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	39091	Switch Harness
2	93890	Fuse Holder
3	93850	Fuse, 8 Amp
4	96170	DC Gear-motor
5	39073	Shaft
6	92715	Switch, Pushbutton

## 7.0 Assembly Diagrams & Parts



## **8.0 TROUBLE-SHOOTING**

If the screw jams when you start to remove an end-plug, immediately stop and reverse the screw (push the switch up, toward “Release”). Probably the vial is misaligned, and you shouldn’t risk cross-threading the screw or end-plug. Align the vial properly and try again.

If the screw still jams or won’t engage, check the bell, screw, and end-plug for ice. The 6814 AUTOEXTRACTOR has been tested extensively with chilled vials but if there is enough water present (as ice on the vial or as water on the screw and guide), the resulting ice may obstruct the proper functioning of the 6814.

Water regularly condenses on the 6814 bell and screw. Wipe it off with a dry cloth or paper towels before inserting a chilled vial.

***CAUTION! When a vial is chilled, handling it requires wearing cryogenic gloves. This is also true for any chilled vial parts or chilled sample. Custom cryogenic gloves are available from SPEX CertiPrep, Inc., in four sizes, under catalog numbers 6900S (small), 6900M (medium), 6900L (large), and 6900XL (extra large).***

## **QUESTIONS?**

If you have any questions about the operation of your 6814 AUTOEXTRACTOR, please call the SPEX CertiPrep Sample Preparation Equipment Division at 1-800-522-7739, or 732-549-7144.

## **9.0 WARRANTY**

SPEX CertiPrep Inc. guarantees its products and new equipment against defects in materials or workmanship for two years from the date of original shipment. Repairs, replacements, or parts are guaranteed for 30 days or for the remaining original warranty period (whichever is greater) for the item that was repaired or replaced. Items not produced by SPEX CertiPrep carry the manufacturer's warranty only.

### **9.01 Product Specifications**

Every effort has been made to provide complete and accurate product operation and information in this manual. However, since specifications are subject to change without notice, changes may be made from time to time to improve the performance of the product. Therefore slight changes that are not reflected in the current illustrations should be considered minor and inconsequential for the purposes of this operating manual.

### **9.02 To Arrange A Return Shipment**

We want you to be happy with whatever you purchase from SPEX CertiPrep. Please bring any problem to our attention, but please DO NOT RETURN any item before contacting us for a Return Authorization Number and instructions. Unauthorized returns will be refused. Cost for all return transportation is the responsibility of the customer. Credit for returned merchandise will be issued only after goods have been received and inspected. Returned goods are subject to a 25% restocking charge up to a maximum of \$200.00.

### **To Contact Us**

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