Article

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How Vacuum Desiccators Work

And other paranormal experiences

OK, I admit it sounds a little like the beginning of a bad joke. A hearing aid wearer walks into a repair lab and says, "My hearing aid quits after I wear it for awhile." The technician takes the hearing aid, puts it into a funny looking chamber and turns on a vacuum pump. After a couple of minutes the technician gives the hearing aid back to the user and says, "Have a nice day." End of story – HA HA HA.

Some kind of magic?

Seems like some hocus-pocus. How can putting an aid in a vacuum chamber bring it back to life? Well, here is the theory: hearing aids can accumulate condensation internally from being in a humid environment. And I mean think about it, the hearing aid is stuck inside a 98.6 degree moisture producing cave with very little ventilation. And some wearers perspire more than others making their instruments even more susceptible to this problem. Symptoms include cutting out, distortion, weak or no sound. It can be a tricky diagnosis because it may not happen every day, and it may not give the same symptom every time.

How does it work?

Vacuum desiccators work by sucking the air out of the chamber, including the air inside the hearing aid. And since the moisture is getting in through the air, you will be removing the moisture by removing the air. Now if you suspect a hearing aid may have internal condensation, it is important to get it under vacuum ASAP. This can help make a better diagnosis because if you leave the hearing aid lying around for awhile, it will dry out on its own and will most likely start working again. You and your customer will then be left guessing as to what the problem may have been.

Now this is just a theory, but you know all the times you have sent a defective unit back to the factory for repair, and they couldn't find anything wrong with it? Most likely it had internal condensation and by the time it reached the factory it had dried out and was working fine.

Now that "Hg number becomes more important

If you remember, last month we revealed that mysterious and confusing "Hg specification that vacuum pumps boast. Well, I stated that this was not the only important spec when looking for a vacuum pump to clean hearing aids. We talked about the amount of Flow a vacuum pump has, and how important it is in moving air for hearing aid cleaning (You can read that article here: http://www.lightningenterprises.com/articles/vacuum_pump_articles/vacuum_misconceptions.html . Well, when using vacuum to dry instruments the "Hg number becomes much more important. Now remember, we are trying to suck out as much air as possible from the hearing aid, and to do this we need to reach the maximum attainable "Hg reading we can. The more air we remove, the better the chances of drying the hearing aid. Now, if your pump has a smaller Flow spec it will take longer to reach max vacuum, but none-the-less the more air removed the better the drying results.

Again, the customer loves you

Here we go again, talking about customer satisfaction. But think about all those instruments that have been sent back for repair that didn't need it. And how many customers went without their hearing aids when they didn't have to. And the customer knowing that it isn't the hearing aid that is the problem, and how they can help keep it from happening. That is all worth a great deal to you and your customer.