



TIPS FOR SUCCESSFUL RECORD FLATTENING

The key to success with the Vinyl Flat is to figure out the heating time it takes to reach the point where the record becomes warm enough to flatten, but not too warm to damage the record. We provide the tools and you provide the time.

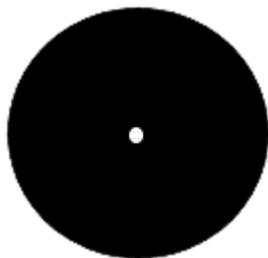
It is impossible to predict the exact heating time for success with record flattening - there are too many variables involved such as the chemical composition of the record, the weight of the record, the type and degree of warp, etc. However, when a record doesn't flatten it is almost always because the vinyl has not been heated long enough to soften and flatten so don't give up after one or two heating cycles.

Exceptions are 7 inch 45's that are made from Styrene and LPs that contain non-vinyl additive chemicals (including some lightweight LPs that were made in the 1970s during the US oil embargo) - these records can be tough to flatten.

A record will never flatten unless the correct combination of temperature, time and pressure is reached. Some customers mistakenly heat a record multiple times for the same length of time (for example, re-heating the Vinyl Flat five times for 3 hours each time) - this is a common mistake. To be successful, always gradually increase the time you heat the Vinyl Flat from heating cycle-to-heating cycle.

HOW TO USE THE GROOVY RINGS

The three different pairs of soft black fabric Groovy Rings included with the Vinyl Flat allow heat to be gently transferred from the Vinyl Flat metal plates to the record. The rings are placed on both sides of the record and are designed to insulate, cushion and protect the record playing surface from the Vinyl Flat metal plates.



Start with these rings – they are general-purpose rings that can be used with any record size (7", 10" or 12") and any type of warp. These are best for LPs with edge warps. The ring fabric compresses around the center record label and lead-in groove to contact the record playing surface.

For 12-inch LPs only. These rings have a large center cut-out for the record label and only contact the record playing surface. These rings are best for dished LPs (LPs that have a convex or concave warp through the entire record)

For 7-inch 45s only. These rings have a large center cut-out for the record label and only contact the record playing surface. These rings are best for flattening 45s.



HOW TO USE A KITCHEN OVEN WITH THE VINYL FLAT

You can use your kitchen oven as a heat source for the Vinyl Flat. To do this, you turn the oven on and off manually to create an average oven temperature of 130 F (54 C) which is proven safe for record flattening. This technique is easy to do, however, you must use an inexpensive digital thermometer to monitor your oven temperature, NOT your oven display as oven temperature displays are very inaccurate. So please, do NOT use this oven technique without a digital thermometer to precisely verify the actual oven temperature!

1. Set your oven to Bake at 250 F (121 C). Once the temperature reaches 130 F (54 C) and this happens pretty quickly, turn the oven off. The oven temperature may continue to rise above 130 F (54 C) after you have turned it off.
2. Once the temperature settles back down to 130 F (54 C), put the assembled Vinyl Flat in the oven.
3. The oven temperature will gradually drop. Once the oven temperature drops to around 125 F (51 C), very briefly turn the oven on again to increase the temperature. Turn the oven off when the oven temperature rises into the low 130 F range (mid 50 C range).
4. Repeat step 3, as needed, for one hour. The goal is to try to maintain an average oven temperature of around 130 F (54 C) during the heating cycle by manually turning the oven on and off.
5. After 1 hour, remove the Vinyl Flat from the oven and wait until the Vinyl Flat is cool to the touch (about 45 minutes) before removing the record from the Vinyl Flat. After the Vinyl Flat has cooled, remove and check the record:
 - If the warp is completely unaffected by the first heating cycle (this is very common!), repeat the heating procedure but increase the heating cycle by **15 minutes** (e.g., you initially tried 1 hours, now try 1-1/4 hours).
 - If the warp is slightly reduced, only increase the follow-up heating cycle by a maximum of **10 minutes** (e.g., after 1 hour 30 minutes in the oven the warp is starting to reduce - now try 1 hour 40 minutes). This 10 minutes of additional heat is critical when you notice a change in the warp – do not exceed it or you risk damaging the record grooves.

Most records flatten between 1 and 2 hours using this oven technique. You will find this technique easy to do because once your oven fills with warm air it will hold that warm air for a reasonable amount of time before you need to turn the oven back on to add more heat.