

CHOOSING GLASS:

The size of the drop ring itself as well as the desired height of the finished project is the main determining factor in what size and thickness of glass to use.

For the **size** of your starting sheet, take the outer dimensions of your drop ring and add 0.25" to each.

For the **thickness**, generally with every 2" of desired height you should add one standard thickness layer (3mm). We recommend at least starting with a double thick sheet or two standard thickness layers regardless of height to make sure you have enough glass to fully drop.

Using the right thickness of glass for your project is vital when using a drop ring. If the glass is too thin, it can stretch to the point of tearing, and holes can appear in the side of your project.

For the most control during dropping, we suggest fusing the glass first, then dropping it.

THE DROP RING FAMILY:

GM₁₂ Mini Round GM14 Small Square GM15 Medium Square GM112 Rectangle

GM62 Medium Round **GM63 Large Round**

GM16 Large Square



DROP RINGS

Drop ring projects are fascinating and fun! But there are many variables to consider when dropping glass like this.

In this general guide, we'll walk you through some of them, as well as explain some of the challenges that can come with working with drop rings. We feel the spectacular results are well worth the effort!

Feel free to email us with any additional questions at: creativeparadiseinc@live.com

FIRING SCHEDULES:

Keep in mind that, as always, our schedules are all suggestions! You know your kiln best, so feel free to adjust them as you see fit. If you'd like tips on getting to know your kiln better, please check out our Firing Notes by clicking here.

Since there's quite a bit of variation in the thicknesses of glass used in drop ring projects, firing schedules can vary. For thicker glass and taller drop distances, increase the hold time at the top dropping temperature. The schedules in the following example project on Page 2 are for three standard layers (9mm) of glass.

One of the trickier parts of the drop ring process is keeping an eye on it. If your kiln has peepholes or vent holes, we recommend looking in during the top temperature segment to make sure the glass is dropping correctly. If your kiln does not have these, you can very briefly crack the lid just enough to see if the glass is dropping. If doing this, be very careful and if possible, stand to the side of the kiln and open it away from you. You're mainly checking to make sure the glass hasn't dropped too quickly and simply pooled at the bottom.

If you can't peek in your kiln or don't feel comfortable doing so, don't worry! You can do drop ring projects without it. It can just be a little trickier to determine what went wrong if a problem does occur.

EXAMPLE PROJECT:

Below you'll find some general guidelines for making the vase seen on the right using the GM14 Small Square Drop Ring!

MATERIALS:

- GM14 Small Square Drop Ring
- COE96 Sheet Glass:
 - Double Thick Clear
 - Color or pattern of your choice*
- Thin Fire Paper
- ZYP/Suitable Glass Separator
 - *We particularly like streaked or marbled glass for

these projects as they create interesting patterns when they drop



PRE-DROP FUSING:

Cut a 6" square of double thick (or two squares of standard thickness) COE96 Clear and a 5" square of the colorful COE96 sheet glass of your choice.

Place a 6.5" square sheet of Thin Fire Paper on a shelf in your kiln, then place the 6" square of clear with the 5" square of color centered on top of it. Fire to a Full Fuse using the suggested schedule in **Table 1** below or your own preferred Full Fuse.

TABLE 1: FULL FUSE				
Segment	Rate	Temp (°F)	Hold	
1	300	1150	45	
2	150	1300	20	
3	400	1460	10	
4	9999	950*	60	

^{*}If using COE90, adjust this to 900°F

TABLE 2: DROP				
Segment	Rate	Temp (°F)	Hold	
1	350	1100	10	
2	200	1280	10	
3	9999	1325	20	
4	9999	950*	60	
5	100	800	10	
6	100	600	0	

^{*}If using COE90, adjust this to 900°F

DROPPING:

Prepare your drop ring with glass separator. If using a spray-on separator such as ZYP, make sure to apply it in a well-ventilated area. If you'd like a video on how we apply ZYP, please click here.

Place a 6" square of Thin Fire Paper on a kiln shelf in your kiln. Place three 5.5" kiln posts on the paper and balance the drop ring on them. If you look top-down through the drop ring's opening, you shouldn't be able to see the kiln posts at all, but you should be able to see the paper. If you can see a post through the opening, adjust until you can't. If you can see a post, it's possible the glass could get caught on it while dropping.

Once your posts and mold are in place, check if the setup is level by placing a suitably sized sheet of any spare un-fused glass (about 6" x 6" for this project) on top of the drop ring. You can then either use a level on top of the glass to see if it's flat, or you can gently press the glass to see if it wobbles at all. If your setup isn't perfectly straight, you can fold small pieces of Thin Fire Paper to place under any uneven posts. It's important that everything is level, since if it isn't the glass can lean to one side and drop unevenly.

Remove the spare sheet and replace it with your pre-fused square.

Fire using the Drop schedule in **Table 2**. If your kiln design allows it and you feel comfortable doing so, quickly peek in during Segment 3 a bit after the glass has hit top temperature to see how it's progressing. Ideally you're looking for the glass to drop evenly to touch the kiln shelf and begin pooling to create the base of the vase.

CHECK THE NEXT HALF-PAGE FOR SOME TROUBLESHOOTING TIPS!



TROUBLESHOOTING:

HOLES IN YOUR FINAL PROJECT?

Either the glass you're starting with isn't thick enough, or you may be holding too long at the drop temperature.

TOO MUCH GLASS POOLING AT THE BOTTOM?

You could be holding too long at the drop temperature segment.

GLASS NOT DROPPING ALL THE WAY TO THE KILN SHELF?

Try holding a bit longer at the drop temperature.

ENDING UP WITH JUST A PUDDLE INSTEAD OF A VASE?

Try shortening the hold on your drop temperature segment.

As you can see, a lot of the possible issues that arise with drop rings come down to figuring out what firing schedule works best for you!

If you'd like some tips on figuring out your kiln, please click here for our Firing Notes.

Still have questions? Email us at creativeparadiseinc@live.com!

Check out more tutorials, information, and molds on our website: <u>creativeparadiseglass.com</u>

