



# Glass Drop Ring Kit

Item No. 40114N

This kit contains enough materials to complete two finished pieces.

## Components:

Quan.	Item #	Description
2	40011K	6" x 6" Clear Glass Sheet
2	40021B	7" Diameter Clear Glass Sheet
1	40085E	Noodles/Stringers Assortment
1	40107G	Abrasive Grinding Stone, Fine
1	40115T	8" x 8" Drop Ring with 4 1/4" round hole
2	40116R	Wire Stand with 5 1/4" opening
1	52776K	1 lb. Jar AMACO® Kiln Shelf Wash
1	11694N	Lesson Plan #18—"A Warm Glass Renaissance"
1	11573L	Drop Ring Technique Sheet



## Drop Ring Glass Slumping:

The drop ring technique of glass slumping involves leaving the center part of the glass piece unsupported during firing so that the glass may slump based only on its own weight and gravity. Drop ring firing is a visual technique that requires the operator to peek inside the kiln between 1350°F and 1400°F in order to watch how far the piece is sagging. Welders' protective glasses should be worn while the operator quickly looks then closes the kiln back up. Leaving the door open too long will cause the kiln temperature to drop too much.

## The Drop Ring:

One drop ring is included with this kit. Apply Kiln Shelf Wash and fire to cone 05 before use.

## Firing Process:

1. Stack the two round glass sheets or the two square glass sheets on top of each other. Decorate the top sheet by attaching Noodles, Stringers, and Frits with white glue, then fuse fire and allow to cool. (See photo 1.)

Optional: Decorate bottom sheet, then fuse fire. Then add second sheet on top and fire again to imbed colors into center of glass before slumping.

2. Support the drop ring on three ceramic supports in the kiln (the height of the supports is dependent on how far you want the piece to drop). The posts must be placed on a kiln shelf that is covered with kiln shelf wash. Position the posts so you have a clear view of the slumping glass. (See photo 2.)

**How to Make a Custom Drop Ring:**  
 The drop ring hole may be round or irregularly shaped and should be slightly larger than the largest piece of glass that is being dropped. The ring may be ready-made or made out of any fired moist clay and may be used multiple times before deteriorating or cracking. When creating a drop ring, a smooth beveled hole is cut into the clay that would leave at least 1/3 of the glass still supported by the ring. More porous clay bodies such as AMACO 27M or AMACO 38M withstand thermal shock well and are recommended. Fire AMACO 27M or 38M drop rings between cones 05-5 with Kiln Shelf Wash thinly applied. *Notes: Remember that the clay ring will shrink about 10% when fired. Care must be taken to not make the curves too drastic, as the glass will not be able to release from tight curves.*



3. Place fused glass onto drop ring that is coated with dry kiln shelf wash. *Note: The glass should be centered over the hole. If it is not, the piece may fall through the hole as the glass stretches when dropping.* (See photo 3.)

4. Program kiln to fire according to firing chart and monitor sagging using protective welders' glasses.

5. When the piece has dropped to the desired level (somewhere during segment #3), select the "SKIP SEGMENT" button and the program will skip to the annealing segment of the program allowing the kiln to cool. Prop open the kiln door about 4" with an insulating firebrick. This will stop the piece from dropping further (freezing the piece). Watch the temperature on the computer screen and allow it to fall to about 1050°F. Then close the door and the kiln will reheat. Watch the temperature climb and start to level off. It will rise up 100 to 150 degrees F. The kiln will then start to cool. Glass may be allowed to drop just a few inches without hitting the bottom of the kiln, or dropped all the way until it sits on the kiln shelf below. If the piece is allowed to drop until it sits on the bottom shelf, the shelf must be coated with Kiln Shelf Wash to prevent sticking.

*Note: When the piece drops, the neck of the glass piece gets thinner. It is important that the glass be sufficiently thick to allow for this thinning. (For a 4" hole in a 7" round piece of glass, the total thickness of the glass piece should be 3/8" if you are trying to drop the piece 8". Trial and error is required). That's why we recommend using two sheets of glass.*

Finished pieces may be self supporting, have flat bottoms, be laid on their side, or placed in an Amaco® No. 40116R Wire Stand.



Supports not included.

### Drop Ring Visual Firing Technique Firing Ramp:

(For 6" X 6" or 12" X 12" sheets, up to 1/2" thick)

Step	1	2	3	SKIP SEGMENT	4	5
Rate	400	600	100		9999	150
Temp	1000	1350	1400		950	750
Hold	30 mn	0	30 mn		30 mn	0
Time	2 hr 48 mn	36 mn	1 hr 30 mn	4 hr 54 mn	1 hr 30 mn	1 hr 18 mn

*Note: All firing and cooling times are approximate. All total times assume a 1 hour time period for the rapid cool portion of the cycle. Actual times may vary.*

## AMACO®/Excel Warm Glass Kilns equipped with Glass Select Fire™ Controller

### GSF-670 (Cone 07)

Firing Chamber:  
41 1/8" w x 24 1/2" d x 13 1/2" h  
Extra-tall firing chamber is deeper than other top firing glass kilns allowing for drop ring and slumping projects.



### GSF-045 (Cone 07)

Firing Chamber:  
10" w x 9" d x 9" h  
Ideal for one small project or jewelry. Insulated bead door allows placement of glass beads on mandrel inside the kiln for annealing.

