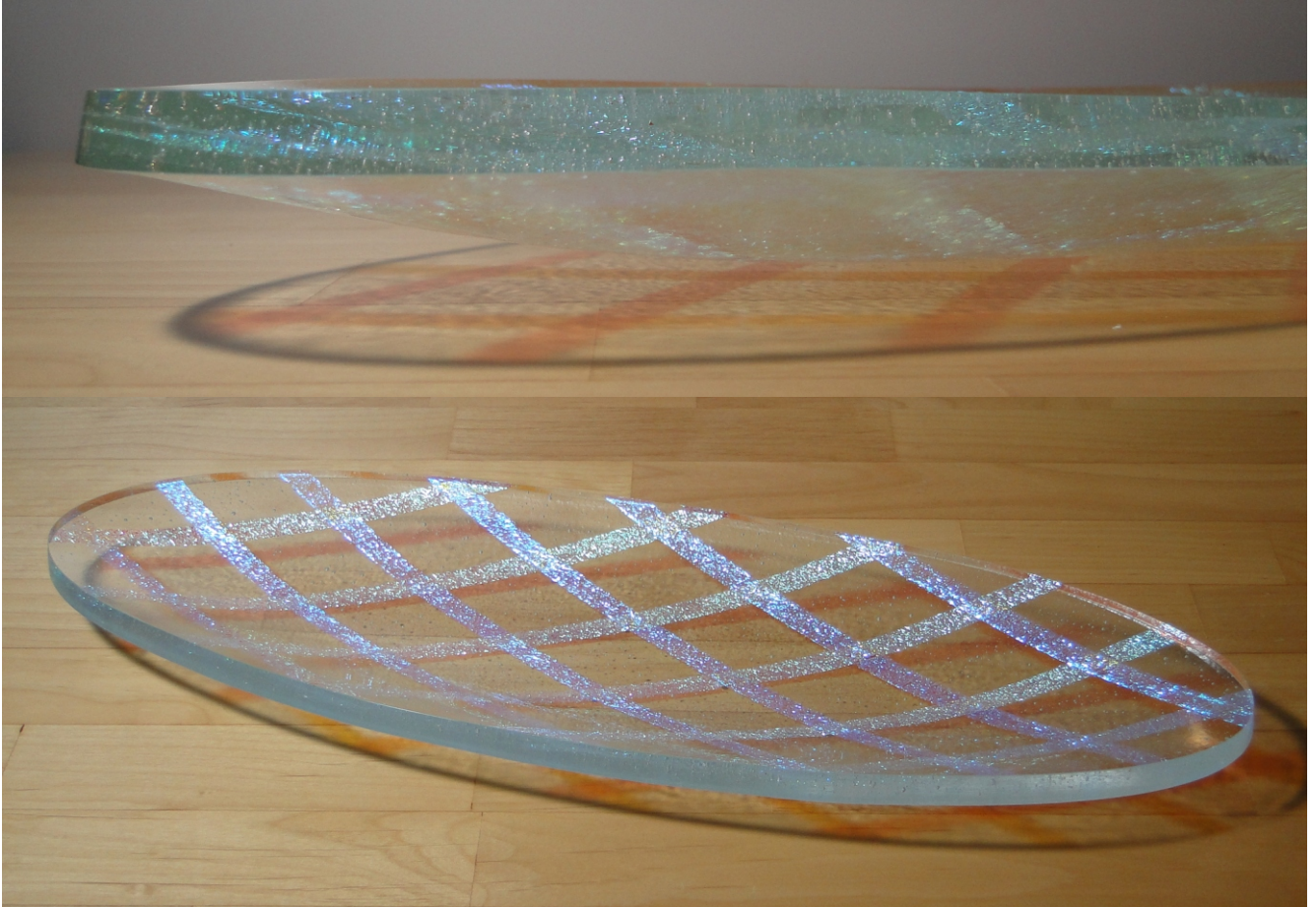


Oval dish

Work instructions and drawings

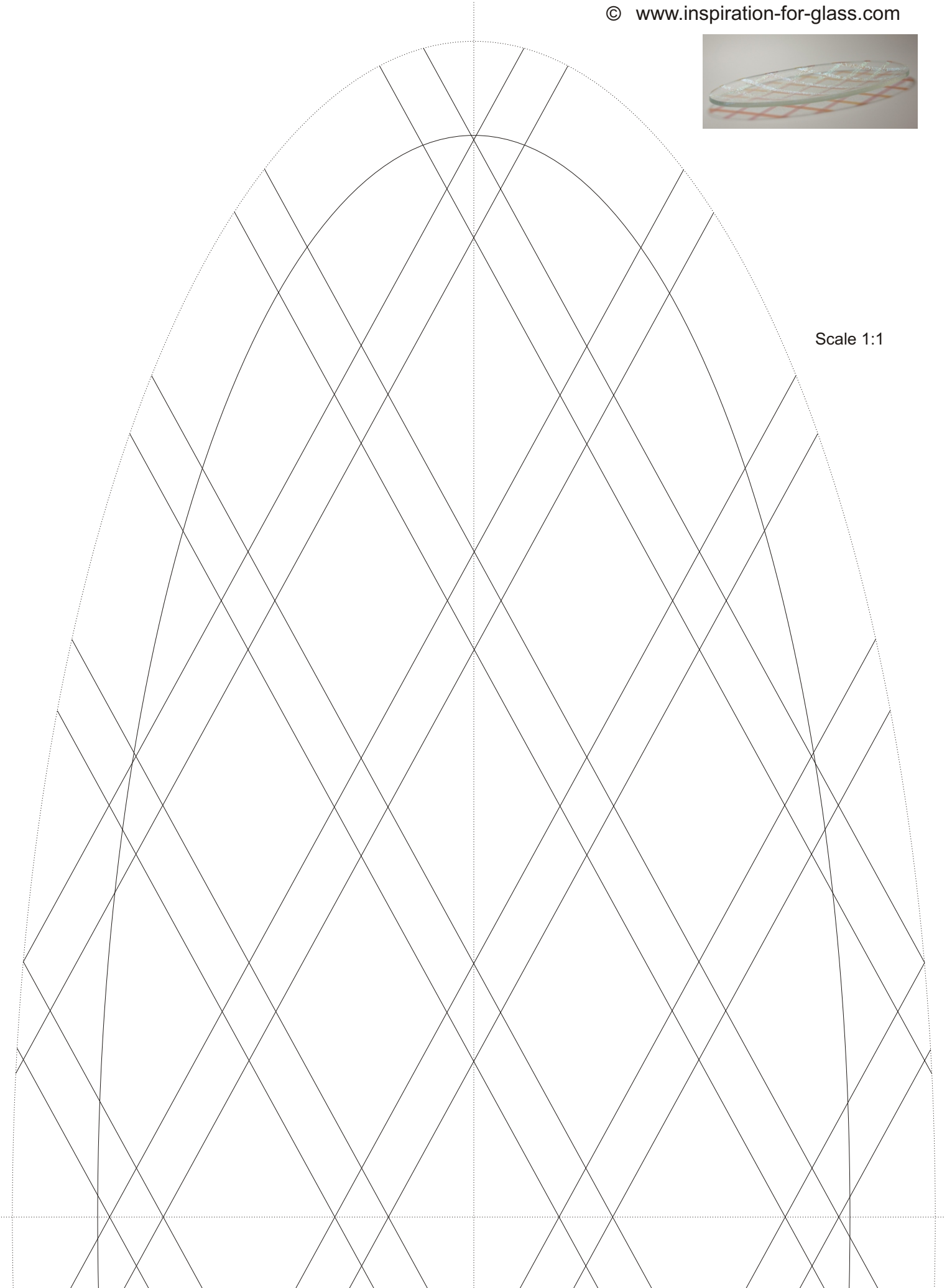


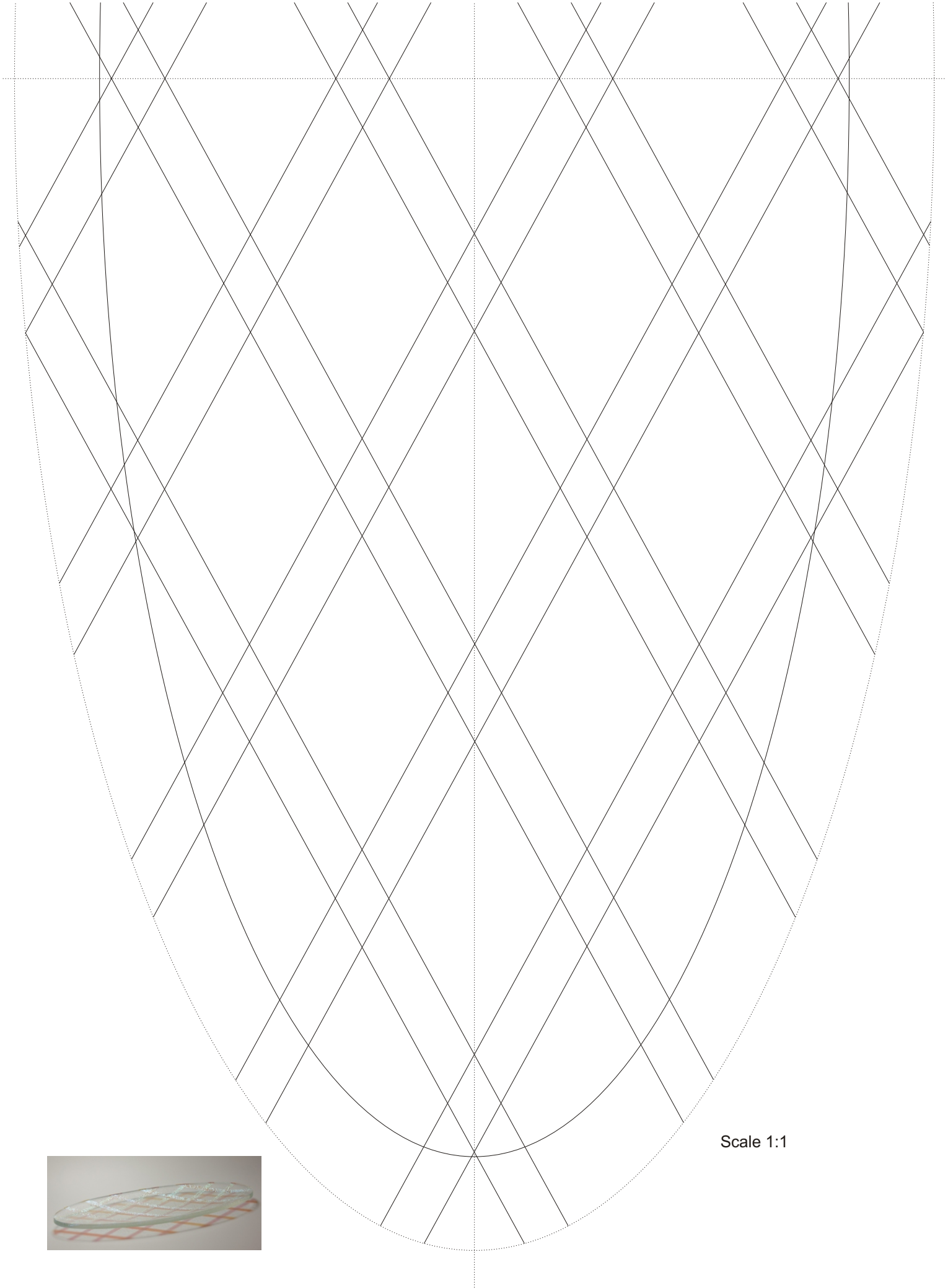
Oval dish size: 46 x 16 cm



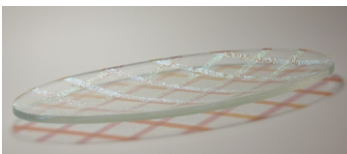


Scale 1:1



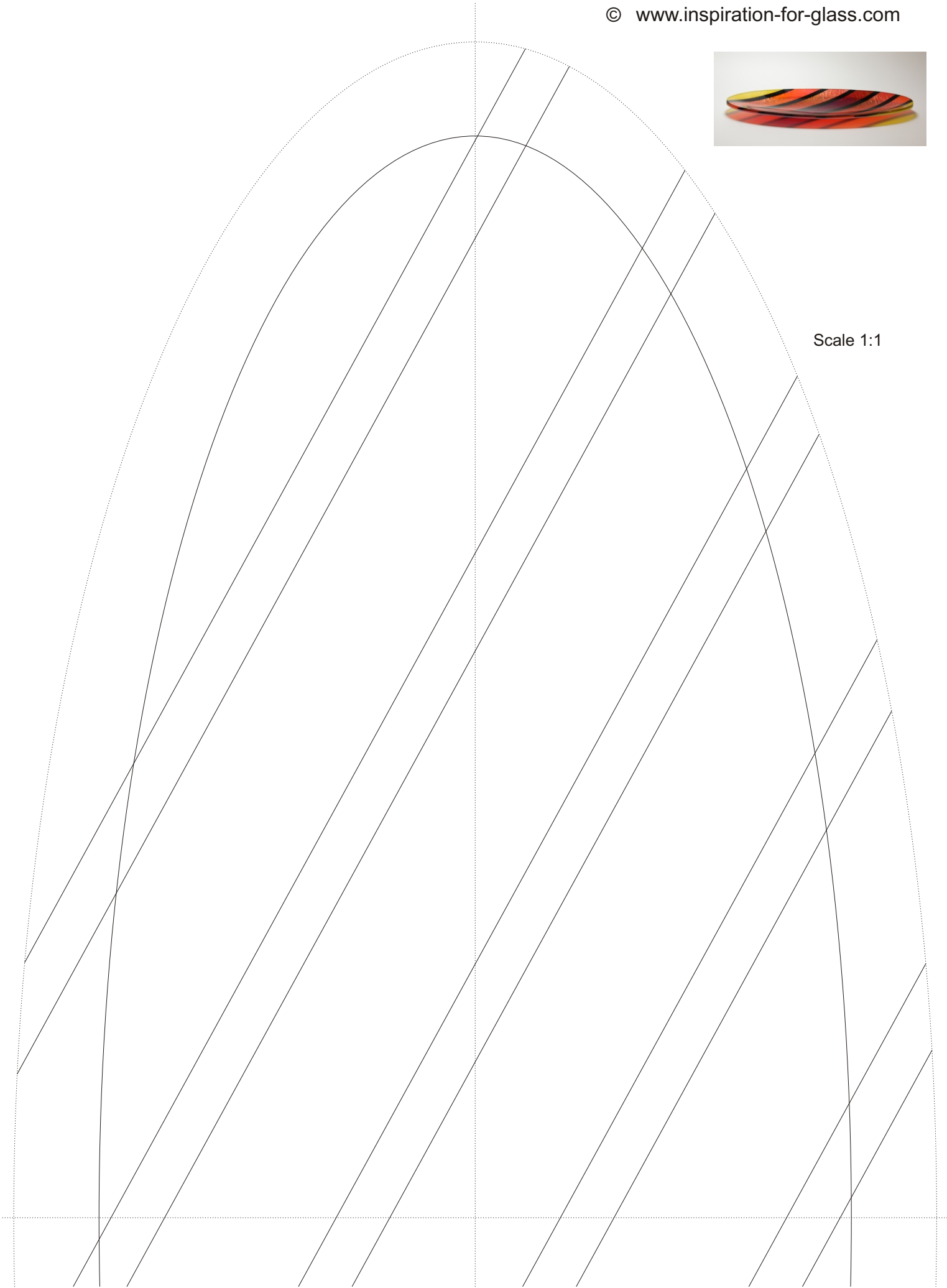


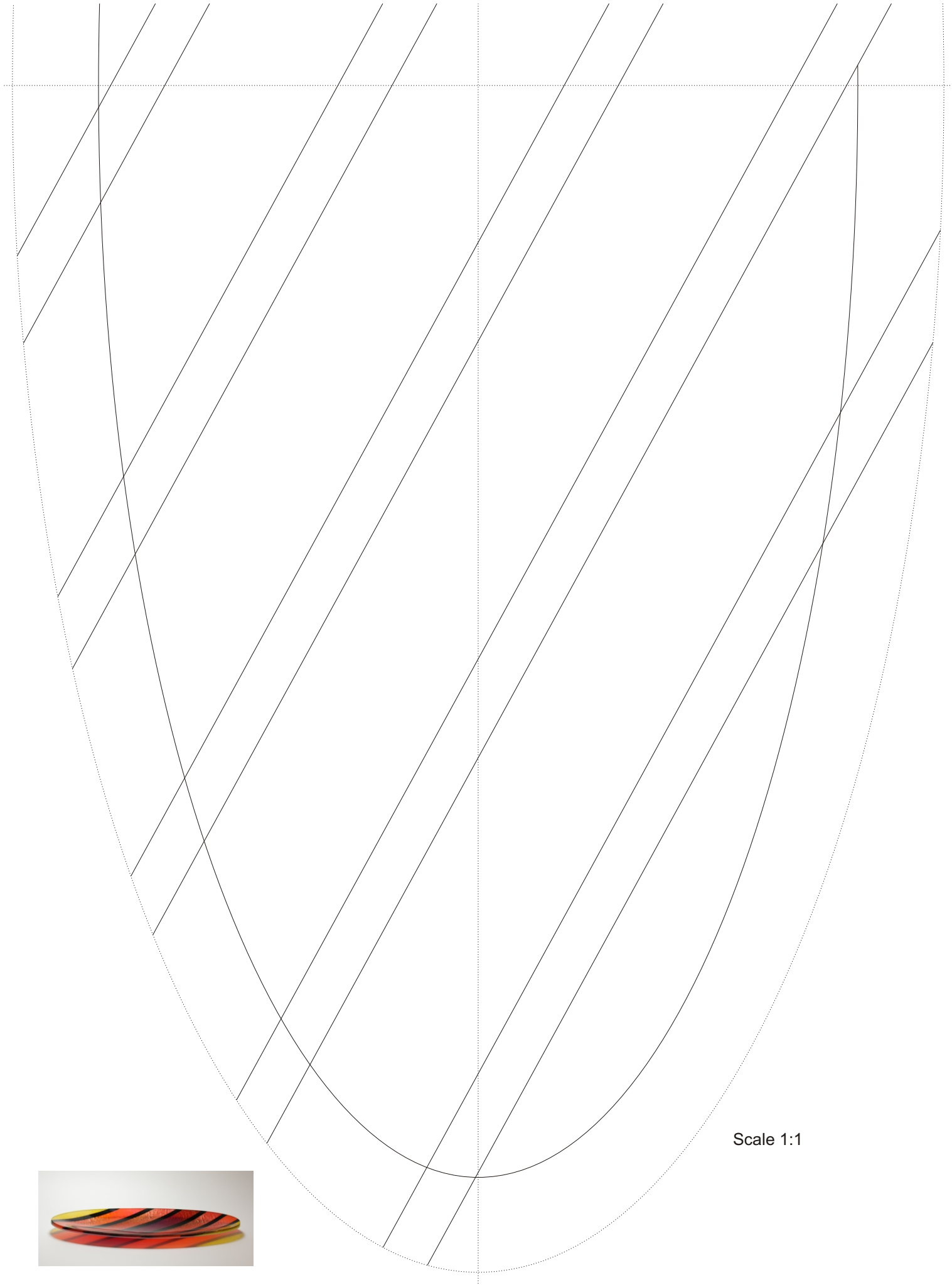
Scale 1:1





Scale 1:1





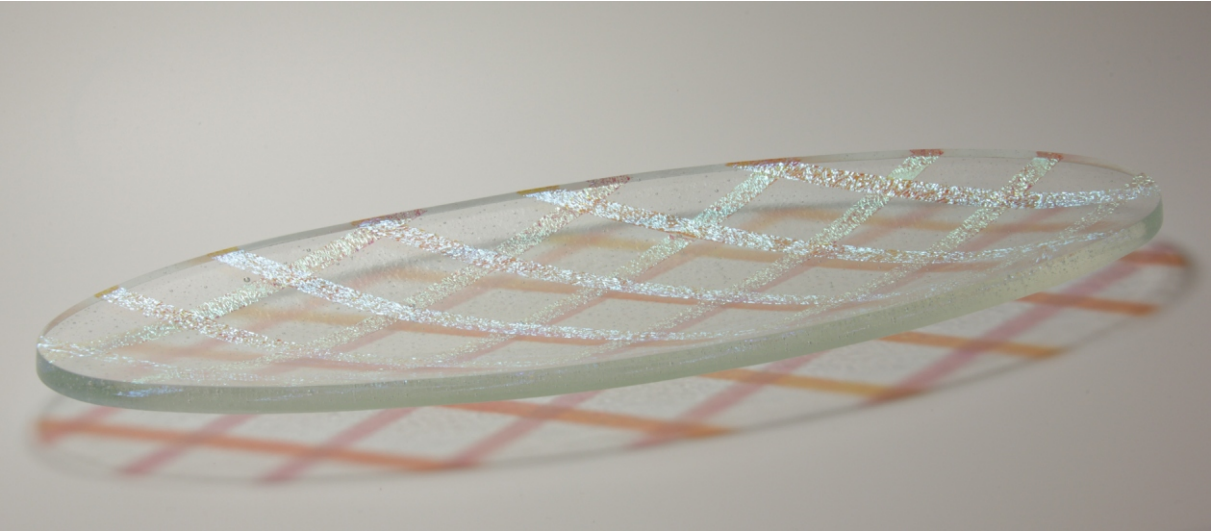
Scale 1:1



Glass selection and structure layer



upper layer	Bullseye Tekta 4mm clear
↓	Bullseye Colored glass strips, transparent iridescent and black
lower layer	Bullseye 0403-30F opaline white semi-transparent



Upper layer	Bullseye Tekta 4mm clear
↓	Bullseye 1101-50F and dichroic strips, coating A (3533028 UTC-OR)
	Bullseye 1101-50F and dichroic strips, coating B (3533008 UTC-PI)
Lower layer	Bullseye Tekta 3mm clear



Glass selection

Transparent glass evolves in the light in a very different character , depending on the Ground.

The colored glass used for this dish as the basis, Bullseye 0403-30F opaline white, has a light transparent effect, in reflected light however milky semi-transparent look - this makes this glass particularly interesting as the basis for glass bowls.

Transparent dichroic glass appears depending on the background completely differently. When in a dark background, the light reflected, makes the coating appear in iridescent colors, on a light background the dichroic transmission appears in a brilliant color.



After you have printed out the pattern, cut the glass strips accordingly.

Now cut the strips of glass, base plate and cover glass to size.

Important!

Cut the design all around 2cm bigger than the dish's original size.

After the fusing process, cut off the edge, before you grind and polish the edge.

This way you get a very accurate edge.



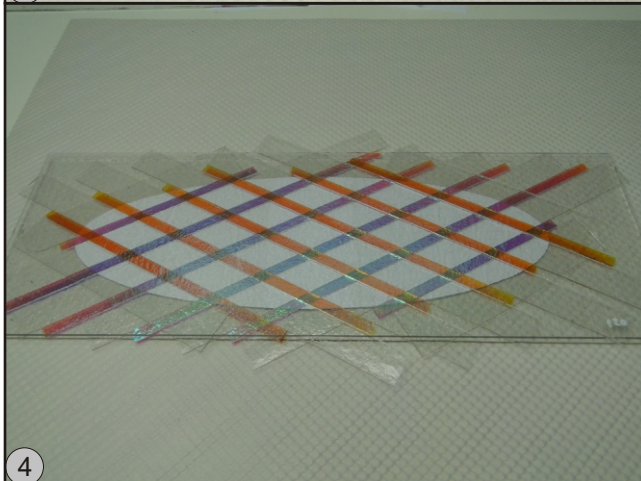
Note:

Schematic representation of the edge of finished grinded and polished glass ..



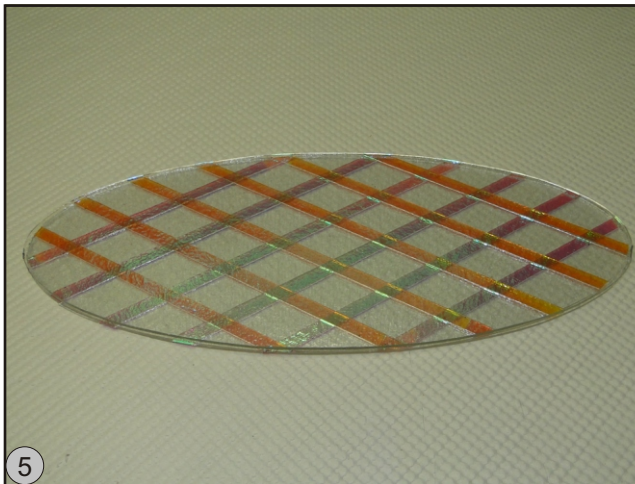
A: If the glass is not to be cut larger first and the edges are polished and grinded just a little.

B: when fuse the glass larger first, follow by sawing off the edge and then grind and polish it.



The operation is in this diamond design the same as in figure 1 and 2. The difference is an additional glass layer.

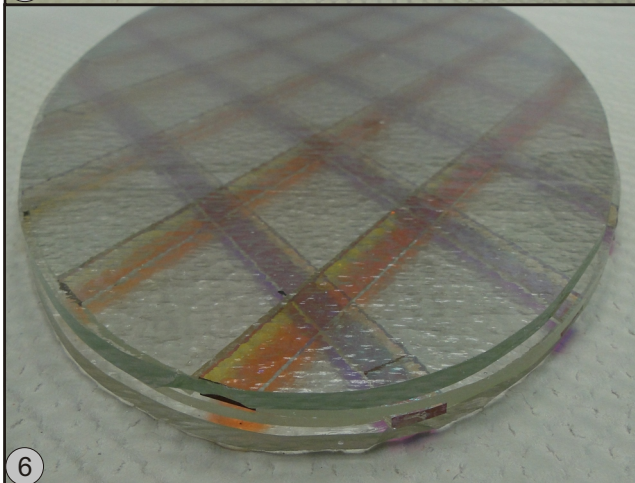
You need 2 layer with colored stripes and the respective colorless strips in between. Arrange the two layers in opposite directions, the result of the strips will be the diamond-shaped design..



Clean the glass parts well!
The least labor is usually, when you, before cutting, clean the whole sheet. Then after that only touch the glass parts with gloves on. This way, you will not have to clean as many small individual parts.

If you do not clean the glass before fusing the impurities will cause mostly devitrification. The glass will look dull on the surface, Fingerprints can also be seen as a dull impressions.

The removing of the devitrified surface is done with a lot of work (sandblasting, etc.)



Layer structure

Details

The edges do not have to fit very well, since they will be sawed off or ground again later.



Fusing furnace Instructions.

Place the pieces of glass in the oven (on previously burnt approximately 3mm thick fiber paper). Put up vertical strips of 3mm thick already burned out fiber paper around the glass plates.

This design is stabilized with stones all around.



Fusing furnace instructions.

Small gaps in the border with stones are usually acceptable. The hot Glass mass will not expresses it self into the gaps, due to the glasses thickness.



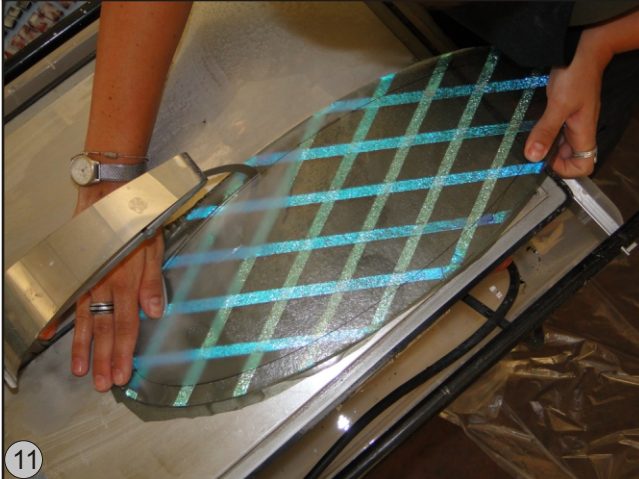
Firing schedule full-fuse
 180 min - 500 ° C - 0min
 0min - 640 ° C - 60min
 0min - 790 ° C - 30min
 0min - 520 ° C, 180 min
 180 min - 460 ° C - the end

Of course, this curve is just a guideline, dependent on the kiln and the glass the curve must be adjusted.

Look into the oven after the fusing

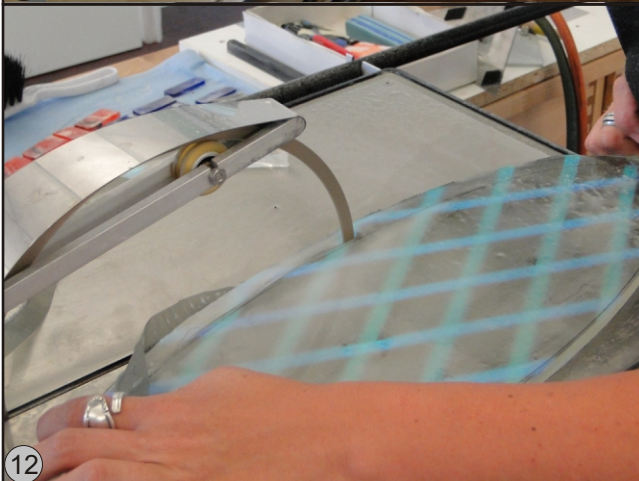


Details after the fusing.
 As previously expected is the edge in the form rendered non-uniformed.
 This is due to the irregular boundary with the fiber paper.
 Therefore, the plate was round about 2cm larger melted as needed for the dish.
 The irregular edge is in the next to be grinded or sawed.



This saw used here (Gemini Revolution XT) is certainly the perfect device - but no prerequisite.
 Other ring saws or band saws also work, just not as fast and easily.

Now draw the exact shape as per design pattern and cut about 1-2mm around the shape.
 Each saw mussels the glass edge out.
 Thus the edge of the glass bowl has no mussels, saw at first larger and grind the rest to cleanly.



Advice:

When cutting glass, it creates sludge that also may contain small glass fragments. If they come under the glass panel, that you are turning, this can cause scratches.
 So, stick to the glass plate from the bottom with a stable film, that after you saw it can be easily removed. So your glass plate will be well protected.



Flat grinder

For the professional edge treatment you need a belt sander or grinder as shown here, a flat grinder. Of course there are the large professional grinders (3070200) of 60cm disc diameter. Dependent on the object size the smaller 30cm version is the perfect device too (3070100).

These grinders are the best equipment. But a smaller device of another brand with a wheel diameter of 20 cm also might do it somehow.



Often fire polishing in the kiln is enough to melt matte / grinded surfaces up to high brilliant. Especially in thicker and complex prepared pieces, you should final polish the edges before bending.

Thicker pieces tend to be slumped at a lower temperature in the ceramic mold. This may not be enough for fire-polish.

... and there is nothing more annoying than just a mediocre result, because you wanted to save a step



... a few notes to polishing ..

Mix in a little polishing agent with water and distribute it over the whole disc.

Spread the polishing agent evenly on the felt disc.

Polish at low speed as indicated in the manual of your machine.



Fusing form long oval, 47x17x2,5cm

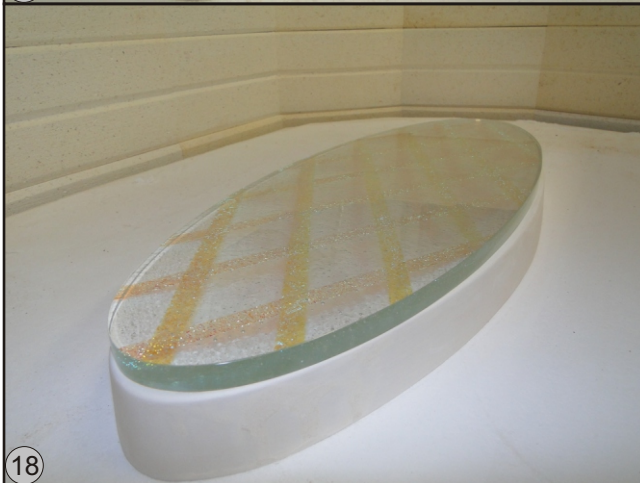
Item number: 3522574

Before you can use the form for slumping the glass plate, it must be coated with shelf primer, and burned out !



Clean the glass plate carefully!

Position the plate centrally on the form.



Firing schedule slumping
180 min - 500 ° C - 0min
0min - 680 ° C - 30min
0min - 520 ° C, 180 min
180 min - 460 ° C - the end

Of course, this curve is just a guideline,
dependent on the kiln and the glass
the curve must be adjusted.



It is hardly possible to determine the upper bending
temperature and holding time perfectly.

So you program the oven first to a safe
temperature and holding time (ie in the lower region
of the likely temperatures and times).
Once this bending process is completed, open the
oven carefully to see the result.
Is the glass plate not bent enough,
increase the temperature slightly and hold
the new temperature again before checking
the result again.



Perfect!

The dish is ready!

If you have questions or suggestions?

Write me at:

markus.klein@inspiration-for-glass.com