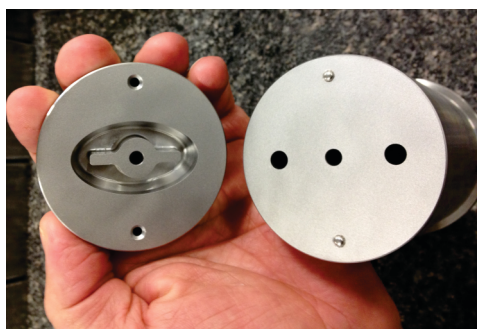


For some things in life,  
there will never be an app.



Conformally cooled mold cores and cavities allow molders to make higher quality parts faster.



## Some Typically Asked Questions for Fusing Cores and Cavities by Polyshot:

- **Question:** With a typical Fused Core like you show here, what is my expected cycle time savings?  
**Answer:** In this particular core, a 39% reduction in cooling time was realized compared with a typical center cooled water baffle.
- **Question:** Is there technical data on material temperature at end of pack and cooling phases? Are there any studies that you can provide to support the results of this technology and the savings it provides?  
**Answer:** Yes, Polyshot has had a independent study commissioned by Shadow Polymer Industries, Inc. You can access a full technical presentation at [www.brazedcores.com](http://www.brazedcores.com)
- **Question:** Can I heat treat the fused assemblies after I get them back from Polyshot?  
**Answer:** Yes, the fused assemblies can be annealed and or hardened by a typical heat treat process. The only limit is the heat treating temperatures should not exceed 1800 degrees F. or 982 degrees C. This typically allows a maximum Rockwell hardness of about 45 RC.
- **Question:** What steel types are acceptable to use with your process?  
**Answer:** Polyshot brazes H13, 420 Stainless, S7, copper and most of the typical mold steels. Other materials can be reviewed for brazing by contacting Polyshot Engineering.
- **Question:** How hard are the assemblies after Polyshot fuses them together.  
**Answer:** The hardness after fusing can be anywhere from soft to about 50RC. This depends on the mass of the assembly to be brazed and the time Polyshot uses to cool them. Many times the customer goes straight to machining after Polyshot ships them to the customer and other times the customer introduces a heat treat step before machining. This is either an anneal or hardening process, if they prefer to machine them hard.
- **Question:** How do I prepare plates for Polyshot to braze? What machining needs to be done to them before I send them to Polyshot?  
**Answer:** Plates to be fused are shipped to Polyshot in the rough finish on the outside of the cores or cavities. The mating surfaces are to be precision ground (surface ground) to a maximum flatness of .0005" (.012mm), to their finished thicknesses. The plates will have the cooling channels machined into them also. Each mating surface will have dowel holes and pins installed to align the plates also. The dowel holes need to be larger than the dowels by .004" (.10mm). Polyshot also has a guide that can be downloaded at [www.brazedcores.com](http://www.brazedcores.com)
- **Question:** How long does Polyshot need to fuse my cores and cavities.  
**Answer:** Polyshot likes to schedule larger projects 4-6 weeks in advance. After we receive the customers cores or cavities typical turn around time is 2 weeks for small orders to as much as 6 weeks for large multi-cavity programs.
- **Question:** What do I need to do to see if I can use Polyshot's conformal cooling technology services?  
**Answer:** For all projects, contact Polyshot Sales for technical assistance.



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