

# Best Practices

## Rubber molding for Jewelry using HTM140

This paper aims to give a step by step guide on how to use EnvisionTEC Perfactory® machines to make master patterns for hot rubber mold production.



Questions or comments:  
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The information and suggestions presented are to be viewed as aids. The intention is to be educational and is not a substitute for sound professional judgment. They are offered as samples for your reference only and are not intended to represent the only approach to any particular issue.

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First the parts need to be prepared in 3D CAD and converted in to a .stl file format. It is helpful if a large 6 mm diameter cone support can be added to the bottom of the shank not only to assist with part building but it is beneficial as this acts as a sprue for the wax pattern.

The type of perfactory machines commonly used for jewelry pattern production are Perfactory® Mini Series, Aureus or Perfactory® Micro these tend to give the best accuracy and surface finish.

## Perfactory® Mini Series



## Aureus



## Perfactory® Micro



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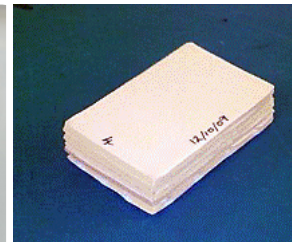


## HTM140 Instructions

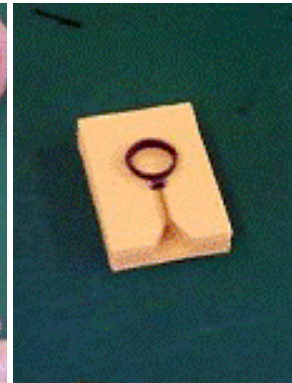
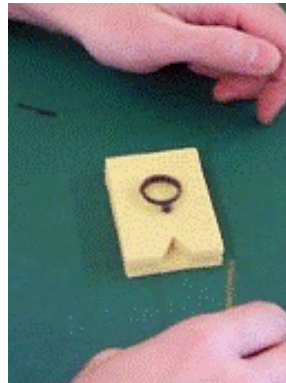
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Parts should be post-cured with Otoflash but not Thermal cured.

Models were cut from base and supports removed but sprues were left on.



Castaldo White label rubber was used, strips are cut to mold size and stuck together in layers. Model is placed on the rubber block and further strips are cut to size around the model and stick in position around and over the model until it is fully encapsulated.



Place rubber moulds into mould frames.



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## HTM140 Instructions

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Put into press and heat to 150 °C apply pressure manually but only turn the pressure wheel a quarter of a turn at a time and leave for a few minutes so that pressure is applied gradually and not too much to crush parts.

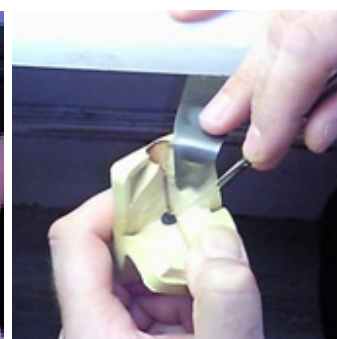
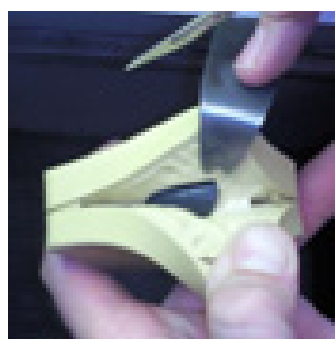
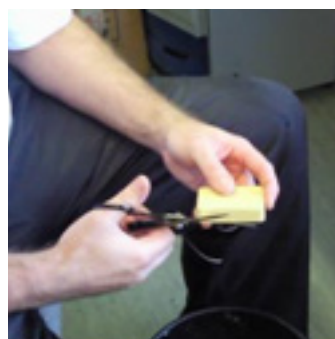


Apply between 3-5 tons pressure or until a 2 mm or more overflow of rubber is visible on the mould frames. This should be left in the press for 45 minutes.



Remove from mold frames by first cooling in water the leaving to cool in air until rubber completely cool to touch.

Trim molds and cut out on bench.



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Taking particular care around delicate settings!



Separate mold and remove model



Place on standard wax injector inject wax and allow to cool for up to 15 minutes on heavy sections.



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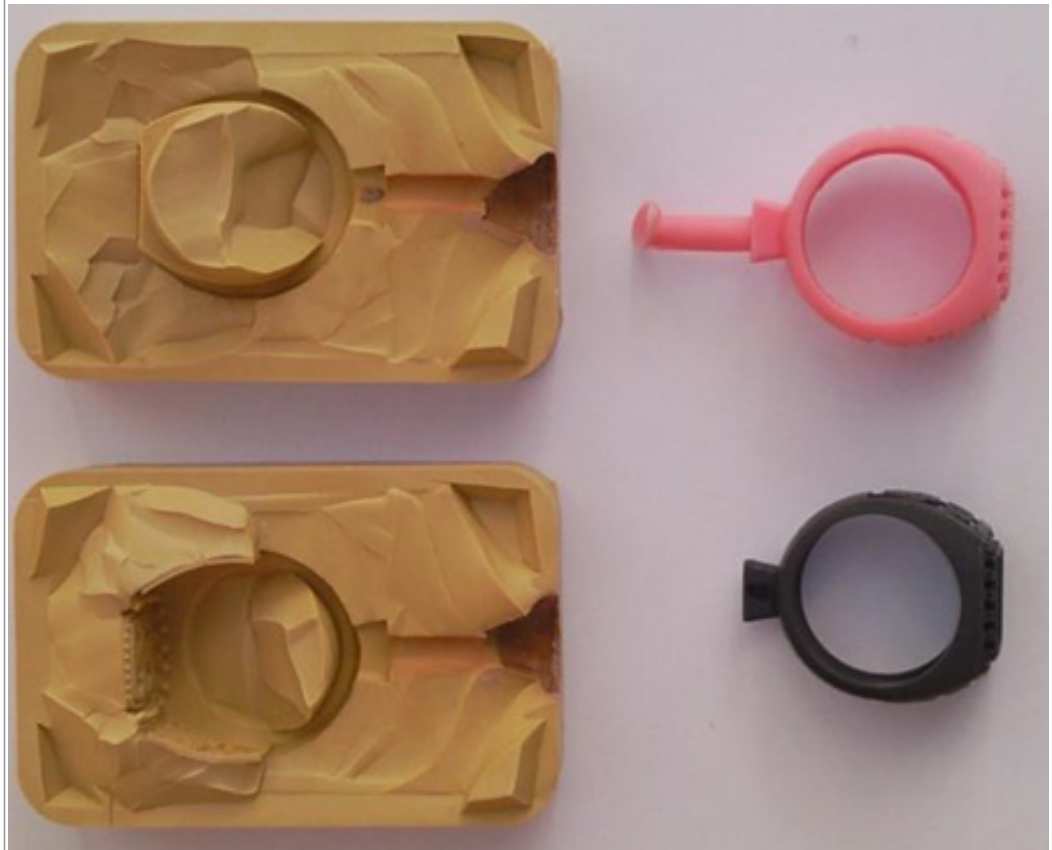
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# Results



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