Subject: How small can holes be printed?
Posted by Pico on Sat, 22 Sep 2012 22:59:49 GMT
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I have searched but can't find the answer to this: how small can holes be printed in ultra detail? I would like to have printed an object, wall size 6 mm by 2.6 mm with a number of holes going through the wall that are .37 mm in diameter. Can this be done? If not, how large could they be printed? Cleaning powder from the holes is not a problem, that can be done with a small drill bit.

Subject: Re: How small can holes be printed?
Posted by Fredd on Sun, 23 Sep 2012 00:59:10 GMT
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I hunted up this choice bit, http://www.shapeways.com/materials/frosted-detail-design-gui delines
Seems a 2mm diameter hole is advised for best results.
Keith

Subject: Re: How small can holes be printed?
Posted by Pico on Sun, 23 Sep 2012 01:28:52 GMT
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Thanks for the info. I think I will submit a design that has .37 mm holes and see what happens. If this can be printed, it would save me an enormous amount of time machining this item.

Subject: Re: How small can holes be printed?
Posted by stonysmith on Sun, 23 Sep 2012 02:26:30 GMT
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2mm is the minimum "drain hole".. you can make much smaller holes than that.
Take a look at the second picture on this model: http://shpws.me/3QAx

The pulley on the end of the arm has a 0.30 mm hole thru it.
In the closeup photo you can see a human hair threaded thru the hole.

Subject: Re: How small can holes be printed?

Posted by Pico on Sun, 23 Sep 2012 02:40:15 GMT
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Wow! That's incredible. Just what I wanted to know. Thanks!

Subject: Re: How small can holes be printed?
Posted by Fredd on Sun, 23 Sep 2012 22:33:54 GMT
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Sorry Pico, thought you were talking about a drain hole. SS was a great model and example.

Subject: Re: How small can holes be printed?
Posted by Pico on Sun, 23 Sep 2012 23:19:25 GMT
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Thanks again for the great info. SS has saved me a ton of work.

Subject: Re: How small can holes be printed?
Posted by Pico on Fri, 02 Nov 2012 11:00:26 GMT
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This is a follow up about the parts that were printed. The holes were not printed, however, I designed a countersink on the outside of the part and I was able to use it tto he hand drill the holes which saved me the time of making a drilling jig and hand drilling them. Also, it was much more accurate. Here's some pics, the first shows the part drilled with a .013" bit and threaded with a .09" monofilament nylon line. The second, it a holding jig, strung with the line and the third, with a tire. This is a wire wheel for a 1/24th scale model. Thanks for the help.

File Attachments

1) DSCN9310.JPG, downloaded 70 times
2) DSCN9315.JPG, downloaded 68 times
3) DSCN9318.JPG, downloaded 59 times