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Subject: Getting the volume discount for WSF

Posted by [AmLachDesigns](#) on Sat, 09 Mar 2013 14:05:20 GMT

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Apologies if this has been covered ad nauseam before but I have a question (or maybe a request) about the volume discount for WSF.

Quote:We also offer a volume and density discount on Strong & Flexible materials. For models that are greater than 10% dense (material volume divided by bounding box volume), after the first 20cm<sup>3</sup>, the remaining volume is calculated with a 50% discount.

I have a model <http://www.shapeways.com/model/960681/> which has the following characteristics:

Oriented Bounds (used for determining printability)

Cm: 18.1 w x 0.3 d x 11.3 h

Vol: 27.08 cm<sup>3</sup>

By my calculations the volume of the bounding box is 61.4 cm<sup>3</sup> so the effective density is 44.1%. If I add 1mm of empty space either side, the new density becomes 26.4%

Given that the model has 162,000 triangles (and neglecting file sizes) and that mutiple unsprued parts are allowed for this material and size of model, I could fit 5 of these into an order and save a decent chunk of money.

My questions:

1. Is a 2mm gap between such items sufficient, or even too much? What is the optimum for Shapeways?
2. If, instead of putting multiple parts in a file, I have a single part but order it 5 (or more times) can I get the same volume reduction if I am prepared for them all to be shipped together in one bag? If so how?

It would seem to me that many people would like to access these discounts in this way and that it might benefit SW too: if I have a big volume packed with several parts it restricts the layout of other items in the print volume, but if I say I want 5 versions of a single item then SW have the flexibility to arrange them however they wish.

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Subject: Re: Getting the volume discount for WSF

Posted by [stop4stuff](#) on Sat, 09 Mar 2013 17:33:42 GMT  
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As the model is fairly flat, you can stack them one above the other 1mm apart and just have a 'string' or loop through the holes to keep them altogether, you get the full discount for all parts and you save the extra handling fees.

How did you add 1mm empty space to each side of the model?

Paul

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Subject: Re: Getting the volume discount for WSF  
Posted by [AmLachDesigns](#) on Sat, 09 Mar 2013 17:48:20 GMT  
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[quote.]As the model is fairly flat, you can stack them one above the other 1mm apart and just have a 'string' or loop through the holes to keep them altogether, you get the full discount for all parts and you save the extra handling fees.[/quote]

Do they need to have the 'string' - my impression from some other threads was that if the items were not close to the min. size they did not need to be linked at all for wsf.

[quote.].How did you add 1mm empty space to each side of the model?[/quote]

At the moment this is just conceptual. What I was saying was that even if I increased the bounding box size by a notional 40% that I would still qualify for the discount. If I were to set up the upload file as I suggested I would just dup the object 4 times and move them to the required spacing. It's the same principal as for earrings, say.

EDIT: Here's the thread --> [http://www.shapeways.com/forum/index.php?t=msg&&th=1895&goto=58134#msg\\_58134](http://www.shapeways.com/forum/index.php?t=msg&&th=1895&goto=58134#msg_58134)

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Subject: Re: Getting the volume discount for WSF  
Posted by [stop4stuff](#) on Sat, 09 Mar 2013 18:15:28 GMT  
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Nope they don't need a string, but it would help out the operators who clean the models and help reduce the risk of Shapeways deciding a 1 model per file rule.

You can't increase the bounding box without adding volume

Paul

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Subject: Re: Getting the volume discount for WSF  
Posted by [stonysmith](#) on Sat, 09 Mar 2013 19:13:07 GMT  
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I did a similiar thing with these: <http://shpws.me/ns83>  
By having the post tie all the items together, the print operator can deal with these as a single object, rather than having to chase down all twelve smaller objects individually.

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Subject: Re: Getting the volume discount for WSF  
Posted by [AmLachDesigns](#) on Sat, 09 Mar 2013 19:35:20 GMT  
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Quote:Nope they don't need a string, but it would help out the operators who clean the models and help reduce the risk of Shapeways deciding a 1 model per file rule.

Okay. But when they break down the block they have to assign each piece that they find to some kind of manifest anyway (I guess) and these models/pieces would be big enough and similar enough for not too much confusion, I would have thought, and also to not cause too much irritation. I guess if I get round to ordering in bulk I can ask them if it's ok or not.

Quote:You can't increase the bounding box without adding volume

I see what you are saying and you are right that I cannot arbitrarily increase the BB in the way that I suggested. But if I create a file of 5 models with 1mm in between each 'layer', then I will have created a new BB with a different (lower) density than that for just one 'layer'. And my point was that I would still qualify for the discount...

What do you think about the other question? If I want, let's say, 5 of these plates is it not better to upload a file for one and a quantity of 5 and let SW organise their print volume how they want but still give me the discount? It seems that this is not possible at the moment. And this would allow me to order say 10 or even 100 without losing the discount or having to worry about file size and triangle limits.

Cheers

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Subject: Re: Getting the volume discount for WSF  
Posted by [stop4stuff](#) on Sat, 09 Mar 2013 20:14:18 GMT  
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Anything over 20cc in one model file is discounted. If you order 5 separate single models you'll be charged for the 5 model files, i.e. 5 x 20cc and then for each model file you'll be charged for the rest over 20cc. As one model file containing 5 shells, you only get the first 20cc charged at full price. the rest is discounted as long as the density is above 10%.

Paul

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