Massivit 3D Inc.
Marine Concepts

Composite Lay-up Tool Time and Material Estimate

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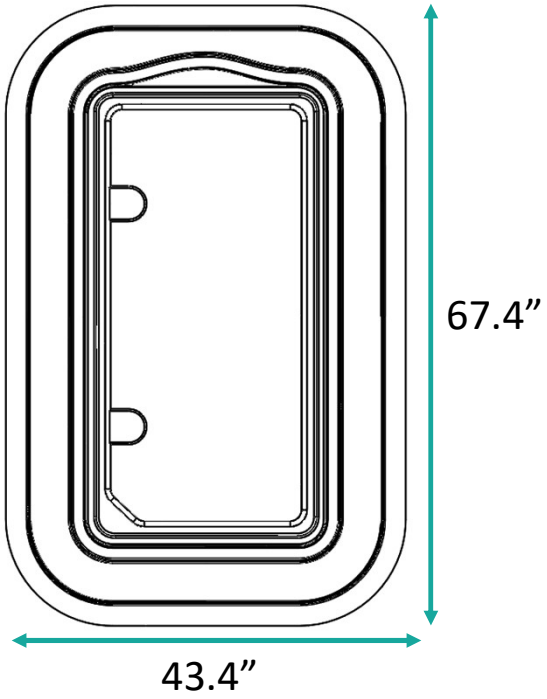
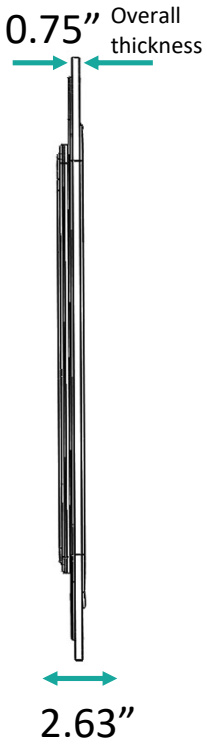
Marine Concept – LRTM Hatch Sample

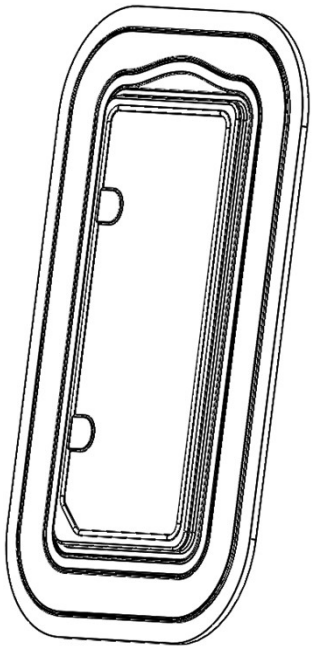
Size & Dimensions

General Dimensions:

X: 2.63” Y: 43.4” Z: 67.4”







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Printing Adaptation

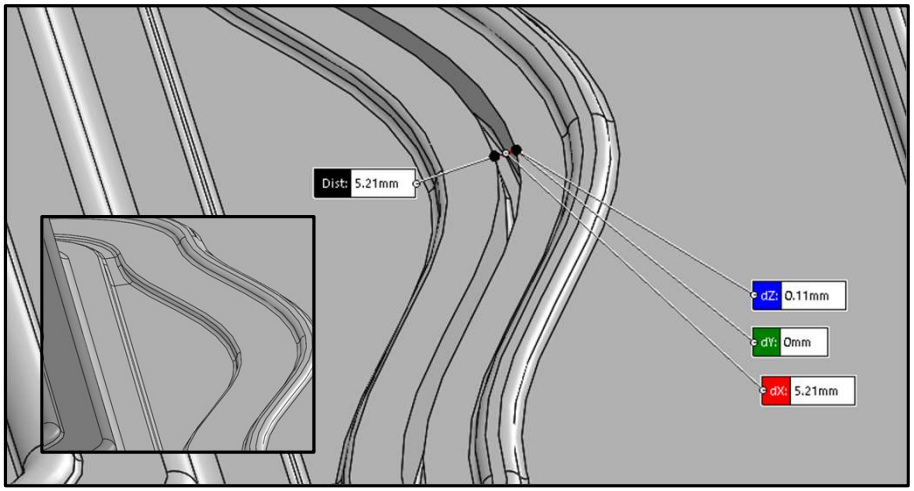
Gasket Slot

- 5mm (0.2”) peripheral slot (Pic 1) would introduce some challenges to slot surface finish and accuracy.

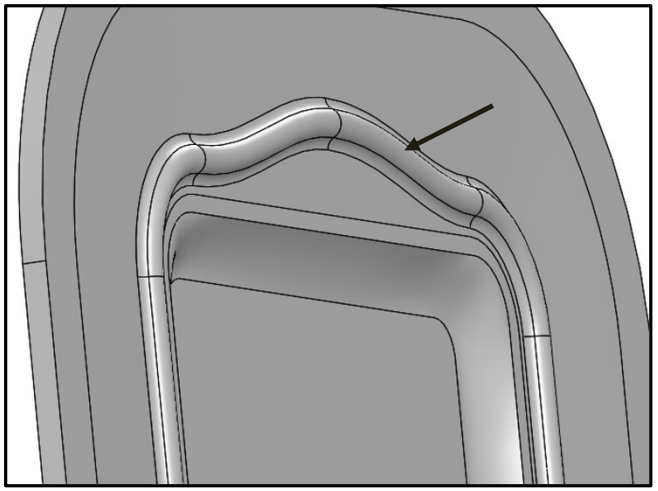
  Options:

  1. Post process the slot only – remove the groove for printing. Mill or Route the slot using a rotary hand milling tool – recommended (Pic 1).
  2. Produce the slot as is - touch up/post processing of the slot would be necessary and other geometrics in proximity may be affected.

- If you choose to print the slot, we will need to add extra thickness for the back side of the slot for rigidity (Radius of ~0.5” - Pic 2).



Pic 1



Pic 2

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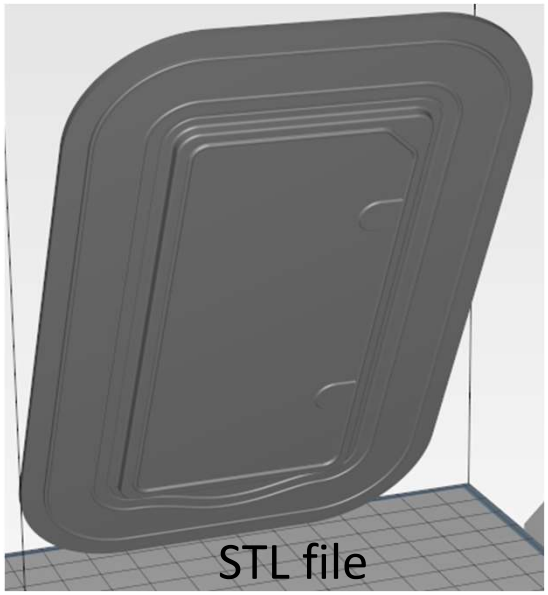
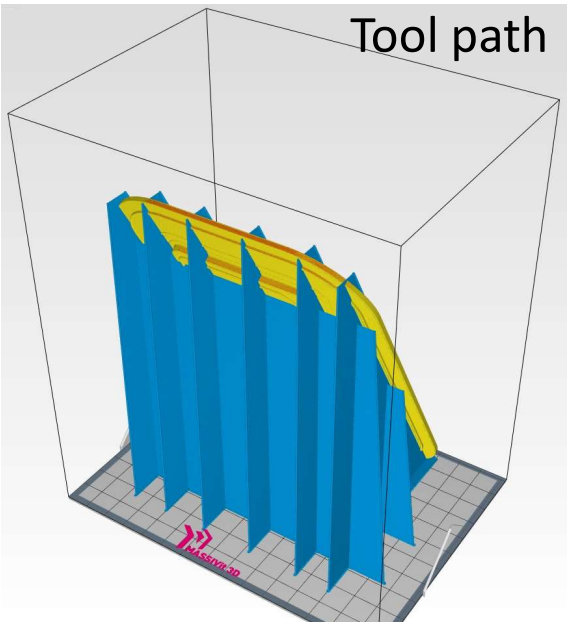
Printing orientation

For optimal tool-side surface quality and better material usage, selected orientation will produce the best printing results.





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Time and Material Estimate

Part:	Shell Layer Thickness:	Mold Material	Shell Material (Water Breakable)	Total Weight (Out of the printer)	Total Print Time	Net Weight (after shell removal)
LRTM Hatch	1 mm	53.3Kg	25.3Kg	78.5Kg	64:34 hours 2days 16Hrs.	53.3Kg

Shell Material: 25.2Kg @ $100.00/Kg: $2,520.00
Mold Material: 53.3Kg @ $50.00/Kg: $2,665.00
Total material Cost: (78.5Kg) $5,185.00

With material discounts on the Shell Material:
Shell Material 25.2Kg @ $40.00/Kg: $1,008.00
Mold Material: 53.3Kg @ $50.00/Kg: $2,665.00
Total Discount Material Cost: (78.5Kg) $3,673.00

Post cure time	Shell removal time
10 hours	30 hours

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Thank You

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