

DuraGlide

How to reskin Magna vat film with a DuraGlide film

Reskin your Magna vat with DuraGlide film so that the glossy side will be in contact with the resin (inside) and the matt side will be in contact with the screen protector (outside the vat).

DuraGlide vat film is supplied with a blue cover film over the glossy side. The blue cover film needs to be peeled off before reskinning the vat.

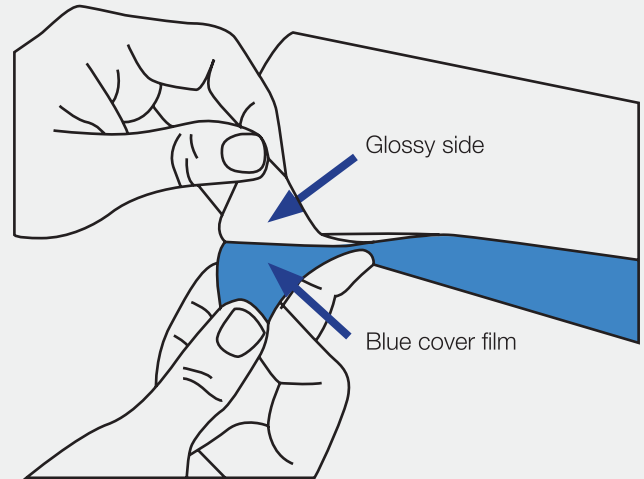


Figure 1. DuraGlide vat film cover over glossy side

Follow the standard Magna vat reskinning process:

<https://www.youtube.com/watch?v=lnWq-t9uLTY>

While considering below points:

- Place the glossy side over the bottom ring of the vat with countersinks facing upwards (Figure 2 and 3).
- Place the top vat ring over the matt side with countersinks facing upwards.
- Change the blow peel gasket every 50 prints.

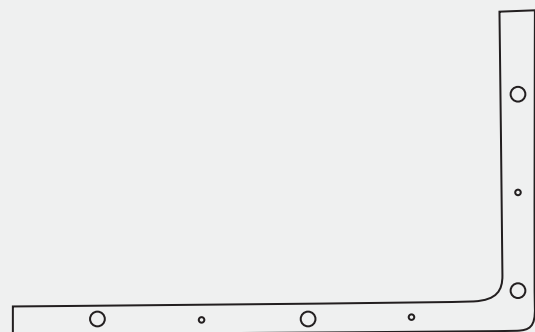


Figure 2. Bottom vat ring with countersinks facing upwards

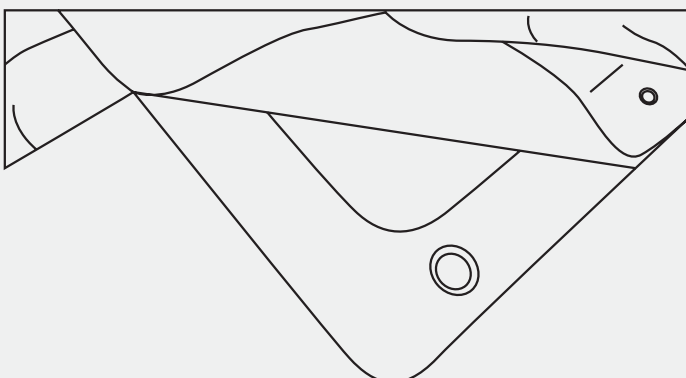


Figure 4. Top vat ring over the matt side

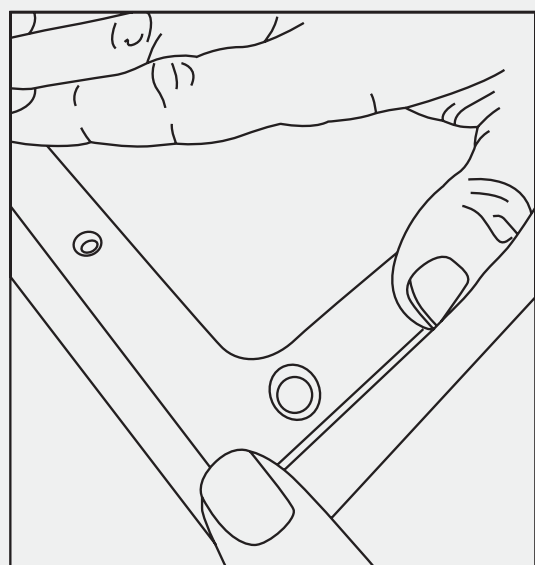
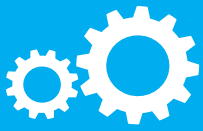


Figure 3. Glossy side next to the bottom vat ring



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How to design for DuraGlide vat film:

DuraGlide film is thicker than 100microns FEP, however it has the same printability as 100 microns FEP.

Industrial Parts

Due to the enhanced peel release performance large parts can show an overall scanned accuracy greater in comparison to printing with 100 microns FEP.

Due to its greater thickness fine features and details may become slightly bolder and dimensionally bigger by about 120-150 microns.

If printing parts with features that need mating, adjust the dimensions in CAD according to:

- Dimensions along x-axis:
 - Male- reduce by 300 microns
 - Female- increase by 300 microns
- Dimension along y-axis:
 - Male- reduce by 300 microns
 - Female- increase by 300 microns
- Pins radiuses reduce by 150 microns
- Holes radiuses increase by 150 microns

This example explains the adjustments. We have amended a test geometry's features according to the design guidelines (Figure 5). Then, we printed with Durable DL110H- Black on Magna with DuraGlide vat film (Table.1).

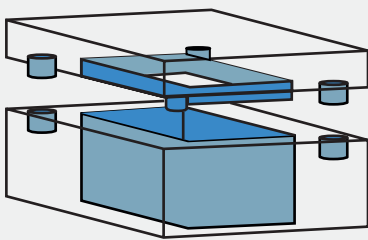
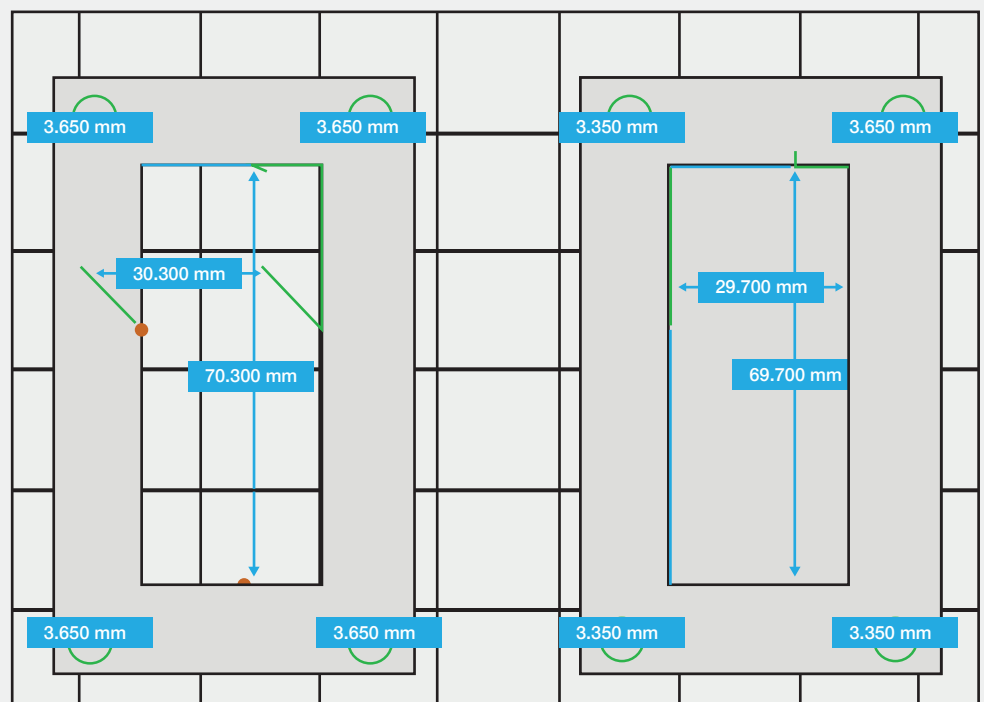
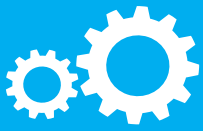


Figure 5. Test geometry with features highlighted and numbered





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Table 1. Test geometry dimension amendments and results

Features	Female/Male	Original dimension (mm)	Dimension with offset (mm)	Actual Dimensions after print (mm)
1	Female	7	7.3	6.95
2	Female	7	7.3	6.94
3	Female	30	30.3	30.06
4	Female	70	70.3	70.02
5	Female	7	7.3	6.95
6	Female	7	7.3	6.95
7	Male	7	6.7	6.91
8	Male	7	6.7	6.9
9	Male	30	29.7	30.01
10	Male	70	69.7	69.97
11	Male	7	6.7	6.9
12	Male	7	6.7	6.91

For dental model printing for aligners, if the required scanned data accuracy is $80\% < 100\mu\text{m}$ or less then we do not recommend using DuraGlide vat film.