

Information for laser cutting

The box parts have the dimensions 7.0cm x 7.0cm x 0.3mm.

The used button parts have the following characteristics:

- diameter of the hole: 2,4 cm
- spikes are 4.0cm apart and have diameter of 0.4mm

The sheets have spaces of 0.5 cm (top, bottom, left and right).

The design files are in .dfx format. They can be edited with AutoCad.

Overview

name	size per sheet	quantity	total size	price	status
PLEXI_1box_sheet	(3 x 7.0cm + 4 x 0.5cm) x (2 x 7.0cm + 3 x 0.5cm) = 0.03565 m ²	1	0.03565 m ²	–	material available
PLEXI_9box_sheet	(3 x 7.0cm + 4 x 0.5cm) x (3 x 7.0cm + 4 x 0.5cm) = 0.0729 m ²	5	0.2645 m ²	14.50 for 5 pcs (300mmx300mmx3mm)	ordered
MDF_6box_sheet	(6 x 7.0cm + 7 x 0.5cm) x (5 x 7.0cm + 6 x 0.5cm) = 0.1729 m ²	7	1.2103 m ²	2,9768 m2 for 14.99	need to pick up

Materials

Plexiglass

<https://www.dokter-plexiglas.nl/plexiglas-opaal>

MDF

https://www.gamma.nl/assortiment/mdf-plaat-1-zijdig-wit-gelakt-244x122-cm-3-mm/p/B129803?q=fh_location%3d%2f%2fcatalog01%2fnl_NL%2f%24s%3d3mm%5cu0020plaat%2ffh_item_type%3E%7bproduct%7d%26fh_view_size%3d20%26fh_refview%3dsearch%26fh_start_index%3d0%26fh_lister_pos%3d0%26date_time%3d20170316T000000%26fh_modification%3d%26fh_sort%3d-%2524search_ranking%26fh_secondid%3db_product_b021129803

How to laser cut

1. import the dfx-file to the laserwork6 software
2. check for double lines (top right 6th icon - delete overlap)
3. click on the black field in the right
4. load necessary parameters from library (plexiglass 3mm/ mdf 3mm)
5. check the simulation - does it start inside outside?
6. send the file to the machine by clicking download
7. use default as name, ie. do not change the name and click okay
8. go to the machine
9. choose the file
10. choose enter for default
11. make sure that the distance between the materials fits the hexagon (place the hexagon underneath and adjust)
12. use spaces to pretend damage from sparks
13. use arrow keys to position laser
14. use screws to adjust distance
15. then hit 'origin'
16. then hit 'frame' - it shows a preview (you see if the material is covered)
17. close the machine
18. switch on the machine (some button in the in the lower part of the machine)
19. hit start
20. see the magic
21. after its done count to five and take out the material