# 〈 藤工芸 opendesk 製作の注意事項 〉

2019年 10月 19日

## CNCに関する注意事項

- 1. opendeskホームページから、LeanDeskデザインデータをダウンロード
- デザインデータは、DWG形式かDXF形式の提供ファイルをCNCに 読み込ませる。
- CNC加工機に材料をしっかり固定し加工する。
   (固定が緩いと 材料のズレ及び飛散の危険性あり)
- 4. 加工データの読み込ませ方・加工の仕方は、その機器のマニュアルに沿うこと。
- 5. 篏合部の板厚を合わせるため補正が必要
- 6. 作業時間:データ入力=半日 加工・補正=1日

## 製作に関する注意事項

- 1. すべり止めの付いた軍手の使用が好ましい。
- 2. 組み立ての際は、十分なスペースを確保する。
- 3. 基本、二人以上で作業する。
- 板の張り合わせは、ボンドを使用しプレス機または、クランプにてよく締め 厚さを統一する。 (ボンドの塗りすぎに注意)
- 5. ボルトは、強度を考慮し長さを変える。 <別紙>
- 6. 誰が何処を触っても不快な思いをしないよう入念にヤスリをかけ、仕上げる。
- 7. 作業時間:加工=1日 塗装(3分ツヤ)=2日 組み立て=3名10分

## <使用材料> ・ラワン合板 t12 4X8 \* 4

- ・シナベニヤ t2,5 4X8 \* 8
- ・6角ボルト M6-30 \* 30 M6-40 \* 8
- ・鬼目ナット M6-13 \*38
- ・ダボ 6mm-30 \* 70 6mm-50 \* 20
- ・ウレタン塗料(クリア)





### FRONT FACE

#### LISING THIS DRAWING

Opendesk products are designed to be OND-milled from standard sheet materials such as plywood. This file as provided is mastered for use with the recommended sheet material specification, sheet alass and thicknesses, and bit alass provided, however the acast materials being used. Itelenance, drill bits, and other local considerations are at the provide, making the end user (making using using torong of the second of the second of the end user (making with serial science) and the second to resolution and next parts within your own sheet Transa accordingly, and take account of any changes in tolerance particularly on joints, tab, and slots prior to outling.

All Geordesk drawings are drawn in 'Teo' projection, and all vectors are arranged into suitably named layers describing the type and doubt of cut required. All such out doubt are assumed to be measured from the top (maximm z-index) sufface of the material. For example the hyper 'TB+PODET-INSIDE\_IMBE' describes a pooleting inside-line out of doubt Hem from the top surface of the material.\*

All Opendesk drawings are provided in duf format. After importing into your OK-machine's CAN software you will need to ensure that all vectors are visible and all polylines are closed where necessary. A pdf version of the drawing is provided with sach dominoid for reference.

Lavers with names beginning '00 NOPRINT' should not be milled. For convenience you can turn these lavers off or delete their elements before setting up your CAN software.

But Opendak product require same combination of 'incide out', and 'outside out', and in same instances 'on-line out', 'postching', or 'dambering', Same Opendak product require damber-side outing (to acting to both front and research faces of a single damber). As a result and beat in driven in (For Face', 'Never Fac'', and 'Bah Faci Taposts, this corresponding leaves ad vectors in such for you to drove your preferred scip according to your Obscittures and animals.

A minimum of 15mm tolerance is left between parts on Opendesk sheets when mested. This should be sufficient for most bit diameters.

A postet may be accompanied by a corresponding second line in, for example, 'TOP-POCKET-OUTSIDE\_1400F', describing the limits of the associated postet.

### FABRICATION GUIDELINES

Before starting to cut your product please take account of the following guidelines. These reflect our personal research and learning and are by no means comprehensive. Please let us know if you have any recommendations for improved standards, and/or outting methods:

- Every CMC-machine is slightly different, you should follow your machine manufacturer's guidelines for best practice, and consult your supplier for suitable drill bits and other recommendations. In our experience the best quality finish is achieved using a suitable vacuum bed to prevent material slippage, and a compression cutter to prevent splintering of the surface of the material, however these will not always be available and such details are left to the discretion and experience of the fabricator.

- It is strongly recommended that you perform some test outs using the appropriate material prior to fabrication, to The introductive density of the second secon

- It is highly recommended that you accurately measure the thickness of sheet you are using prior to fabrication, for It is nighty recommended back you accurately measure but incovers of sneet you are using prior to example using calipers at several points along the sheet. For best results ensure your sheet is adeq free of any warping, knots, or imperfections. ately flat and

Then performing double-side cuts it is important to locate the flipped sheet exactly, to ensure outs to both faces align correctly. This can be achieved using a suitable jig or locating pucks/noggins according to your machine bed.
 For more information consult the guidance on www.opendesk.co.

Inside outs may produce off-out pieces that can vibrate out of piace and interfere with outting. It is recommended to
secure such pieces to the bed prior to outting for removal afterwards.

Mere designs include chamfering and pooleting it is strongly advisable to start with these cuts prior to full-depth cut-outs in order to avoid any slippage and misalignment in the material.

Each Opendesk part can be out using single of multi-pass outting. Slower speeds and multiple passes will tend to
problem higher quality cuts and readow the need for sanding and Thisking at the opense of outting time. This is left to
the discretion of the user based on their time and machine.

#### SUMMARY TERMS AND CONDITIONS

This file represents the latest version of an open source product, designed to be ORC-milled from standard sheet materials. Whilst Opendesh make every effort to provide fully prototyped and tested designs, it is the responsibility of the end user (maker) to check file contents prior to fabrication, and ensure suitable do dilignese and reasonable skill and care in fabrication and assembly.

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#### USING THIS DRAWING

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All Geodesi dearings are deam in "top" projection, and all vectors are arranged into mitably named layers describing the type and depth of out required. All such out depths are assumed to be measured from the top (maximum z-index) surface of the material. For example the layer '10=4900ET-MBIDE\_IABM' describes a poolating inside-line out of deph hem from the top surface of the material.\*

All Opendesk drawings are provided in dof format. After importing into your CND-machine's CAN software you will need to ensure that all vectors are visible and all polylines are closed where necessary. A goff version of the drawing is provided with and homited for reference.

Layers with names beginning '00\_NDPRINT' should not be milled. For convenience you can turn these layers off or delete their elements before setting up your CAW software.

Hest Developing product require use combination of inself out of double out, and income instances involves out, 'postering', or 'doubting', and beneficial require double-side cutting (secting to both front and reverse faces of a single both). As a rout can have it down in Front Davi, 'Brown Fock, and Beth Face' legants, with corresponding layers and vectors in each for you to choose your preferred setup according to your Objectstrate and whole.

A minimum of 15mm tolerance is left between parts on Opendesk sheets when nested. This should be sufficient for most bit diameters.

 A pocket may be accompanied by a corresponding second line in, for example, 'TOP-POCKET-OUTSIDE\_I4MM' describing the limits of the associated pocket.

### FABRICATION GUIDELINES

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- Every OD-such re is slightly different, you should follow your machine manufacture's guidelines for best practice, and countly your supplier for multiche drill bits and other recommendations. In our operations the baselines during a multiche during and the such add to prevent material allogue, and a compression catter to prevent splitsering of the archeof of the statistic, however these will not always be available and such distalists are left to the dissertion and experision of the factoriant.

- It is strongly recommended that you perform some test outs using the appropriate material prior to fabrication, to calibrate for mittable tolerance and bit size. A test taket is included with this deveload package. The test file includes some of the standard dpendok joints of different types in three averying degrees of followance to account for variations in material biologies (-/). Please refer to be test sheat pieldings for any information.

It is highly recommended that you accurately measure the thickness of sheet you are using prior to fabrication. For
example using calipers at several points along the sheet. For best results ensure your sheet is adopately flat and
free of any weaping, knots, or imperfection.

 When performing double-side cuts it is important to locate the flipped sheet exactly, to ensure outs to both faces align correctly. This can be achieved using a suitable jig or locating pucks/reggins according to your machine bed. For more information consult the guidance on wave pomodex.co.

Inside outs may produce off-out pieces that can vibrate out of place and interfere with outting. It is recommended to
secure such pieces to the bod prior to cutting for removal afterwards.

 Where designs include chamfering and pocketing it is strongly advisable to start with these cuts prior to full-depth out-outs in order to avoid any slippage and misalignment in the material.

- Each Opendesk part can be out using single of multi-pass outling. Slower speeds and multiple passes will tend to produce higher quality outs and reduce the need for sanding and finishing at the expense of outling time. This is left to the discretion of the user based on their time and machine.

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