RhoDoDe

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RhoDoDe is geometrically a **rhombic dodecahedron**. This might be not quite obvious at the first glance, because the „edges" of the solid are just as thick as they are long.

Compare the rhombic dodecahedron in *fig. A* with that in *fig. B*: The coloured faces in *fig. A* are replaced by „frames" of the same colour in *fig. B*. These frames represent the edges of the rhombi, leaving its faces uncovered. You now can look through the faces and see the edges at the back.
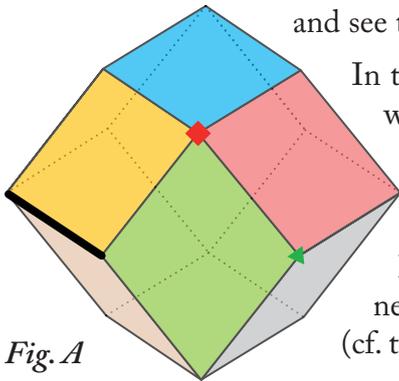
In the finished model the four rectangles of a frame will become squares. The black highlighted edge in *fig. A* that turns into the black rectangle in *fig. B* will also become a square in the finished model (like all other edges of *fig. A*). Either four acute or three obtuse rhombus corners meet in a corner of the rhombic dodecahedron (cf. the red square and the green triangle in *fig. B*).
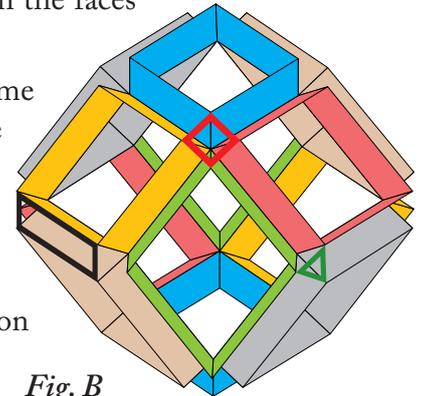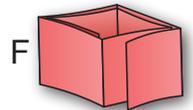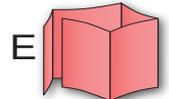
Fig. A

Fig. B

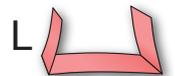## The Material (use paper that is stiffer than ordinary origami paper)

12 strips 1x**8*** to make the rhombic frames for the **face** modules **F**.

F

24 strips 1x**5*** to make the triangular **edge**-modules **E** that connect the rhombuses **F**, and one extra strip folded in half to be used as a tool when folding the modules **F**, **E** and **L**.
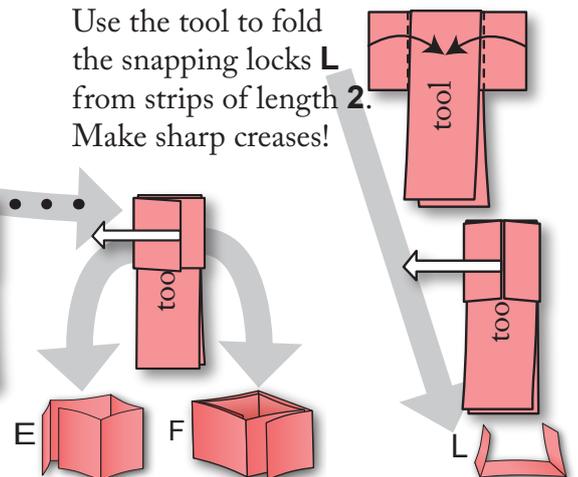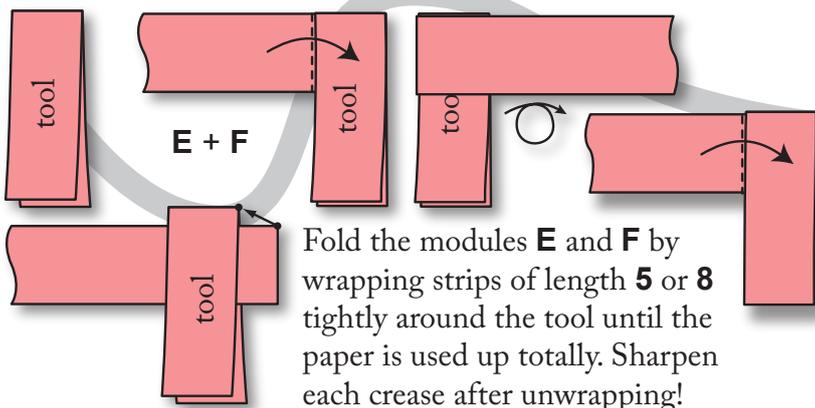
E

24 strips 1x**2*** to make the snapping **lock**-modules **L** that prevent the triangular „edges" **E** from unfolding, and build the outer surface of the **RhoDoDe**.
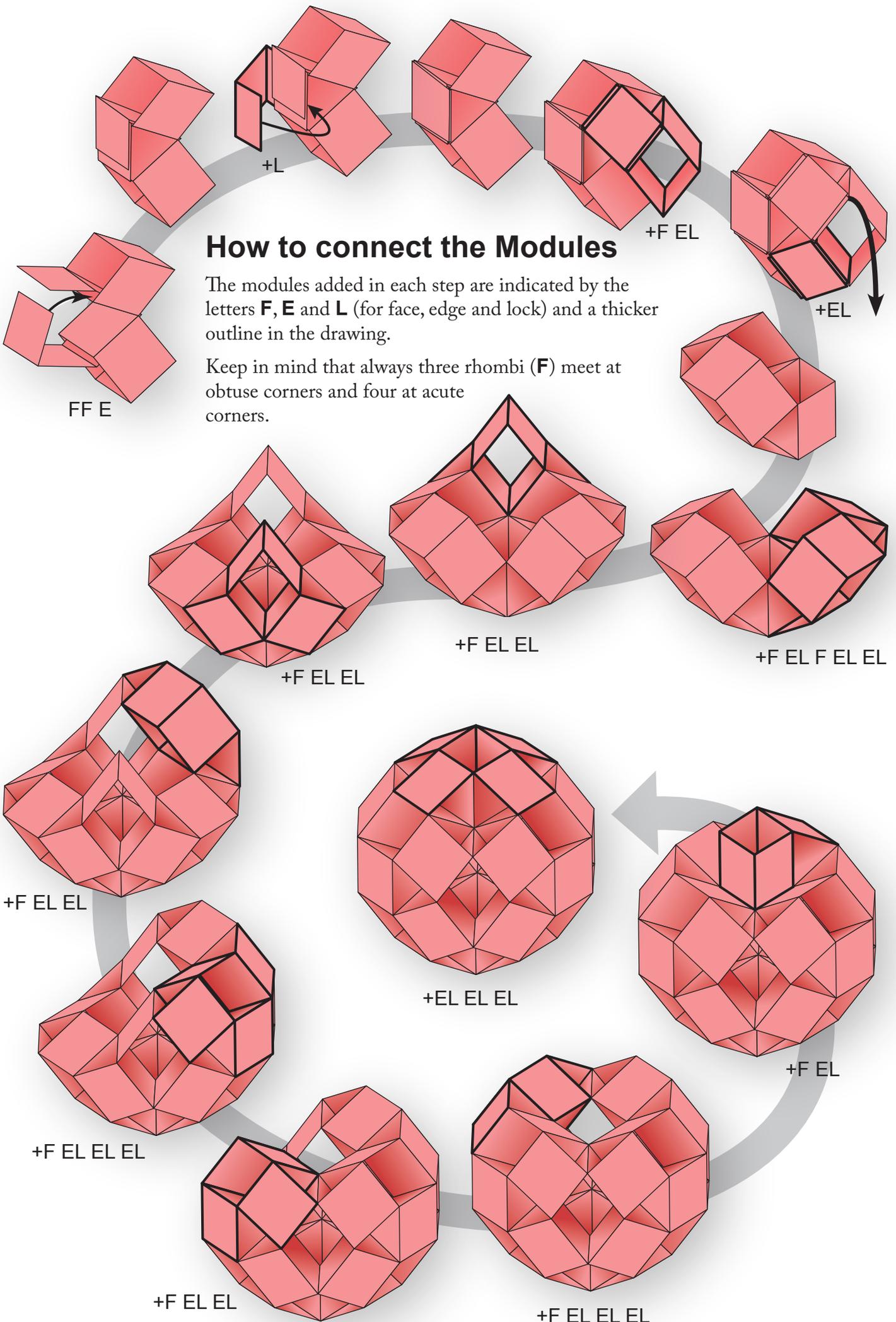
L

* The sizes are given in units of the width.

How to fold the Modules

Use the tool to fold the snapping locks **L** from strips of length **2**. Make sharp creases!

E + F

Fold the modules **E** and **F** by wrapping strips of length **5** or **8** tightly around the tool until the paper is used up totally. Sharpen each crease after unwrapping!

E   **F**   **L**

How to connect the Modules

The modules added in each step are indicated by the letters **F**, **E** and **L** (for face, edge and lock) and a thicker outline in the drawing.

Keep in mind that always three rhombi (**F**) meet at obtuse corners and four at acute corners.

+L

+F EL

+EL

FF E

+F EL EL

+F EL EL

+F EL F EL EL

+F EL EL

+F EL EL EL

+EL EL EL

+F EL

+F EL EL

+F EL EL EL