

FUJIMOTO AND FUSE TWIST BOXES



Fujimoto and Fuse twist boxes use the same fundamental technique. A strip of paper is wrapped around itself to form a tube and then part of the tube is twisted to form a flat base. For a lid, a slightly larger tube is formed.

The difference between the two models is that the Fujimoto box has an extra overlap. This overlap ensures that the colour is on all sides on the box and is a slightly stronger lock.

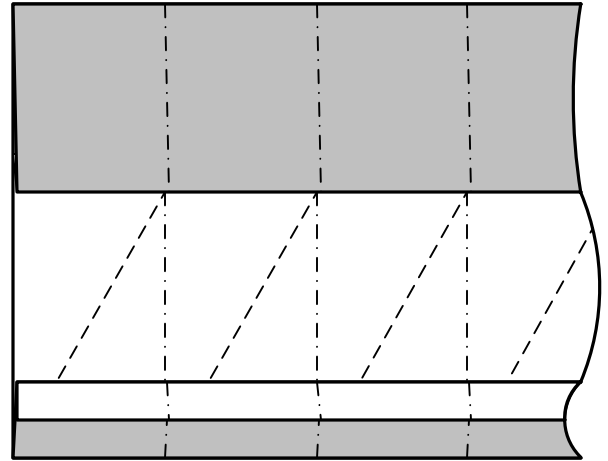
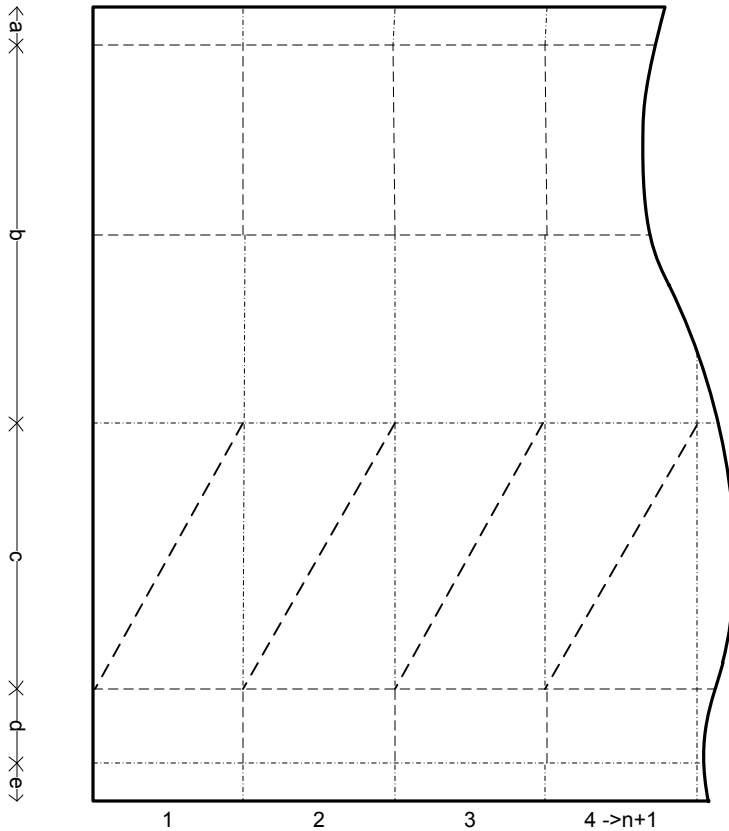
However, because of this overlap, only even sided Fujimoto twist boxes can be made.

Fuse twist boxes however, can have odd numbers of sides (but you have to be careful with the box body. The Fuse twist box also puts the loose part of the twist on the outside of the lid, which means that there is paper available to make a decorative topping.

The following pages are intended as a guide to creating any size of box.

FUJIMOTO TWIST BOXES

Basic crease pattern



Section	Description
a	Lip on the body section, creating a better friction lock
b	The body of the box/lid. It is a double layer.
c	The twist section
d	Overlap to hold the twist in place
e	Lip to improve friction lock and assist in inserting the overlap

Size descriptions:

Section **a** should be small. Less than $b/2$. (Typically 10->20 mm is suitable)
 Section **b** should be the desired height of the box/lid X 2
 Section **d** should be less than $b/2$ (again, 10->20mm is usually suitable)
 Section **e** should be less than section **d** (typically 5->10 mm is suitable)

Section **c** is dependent on the number of sides (**n**) and the width of the side (**w**)

$$c = w * \tan(90 - (180/n)) \text{ (See multiplier table)}$$

Total Height of paper = $a+b+c+d+e$
 Total Width of paper = $(n+1)*w$

Multiplier table	
n	$\tan(90-(180/n))$
4	1.00
6	1.73
8	2.41
10	3.08
12	3.73

Example 1.

A 6 sided box 40mm wide and 40 mm high with appropriate lid.
 Choose **a** = 10, **d** = 10 and **e** = 5.

b will be 80 (40 X 2) and **c** will be 69.3 (round to 69)

Therefore paper for the box will be 174mm x 280mm

For the lid, choose a 20mm height lid with 42mm width. **a**, **d** and **e** can be the same as the box

Therefore paper for the lid will be 138mm x 294mm

Example 2.

A 10 sided box 30mm wide and 30 mm high with appropriate lid.
 Choose **a** = 10, **d** = 10 and **e** = 5.

b will be 60 (30 X 2) and **c** will be 92

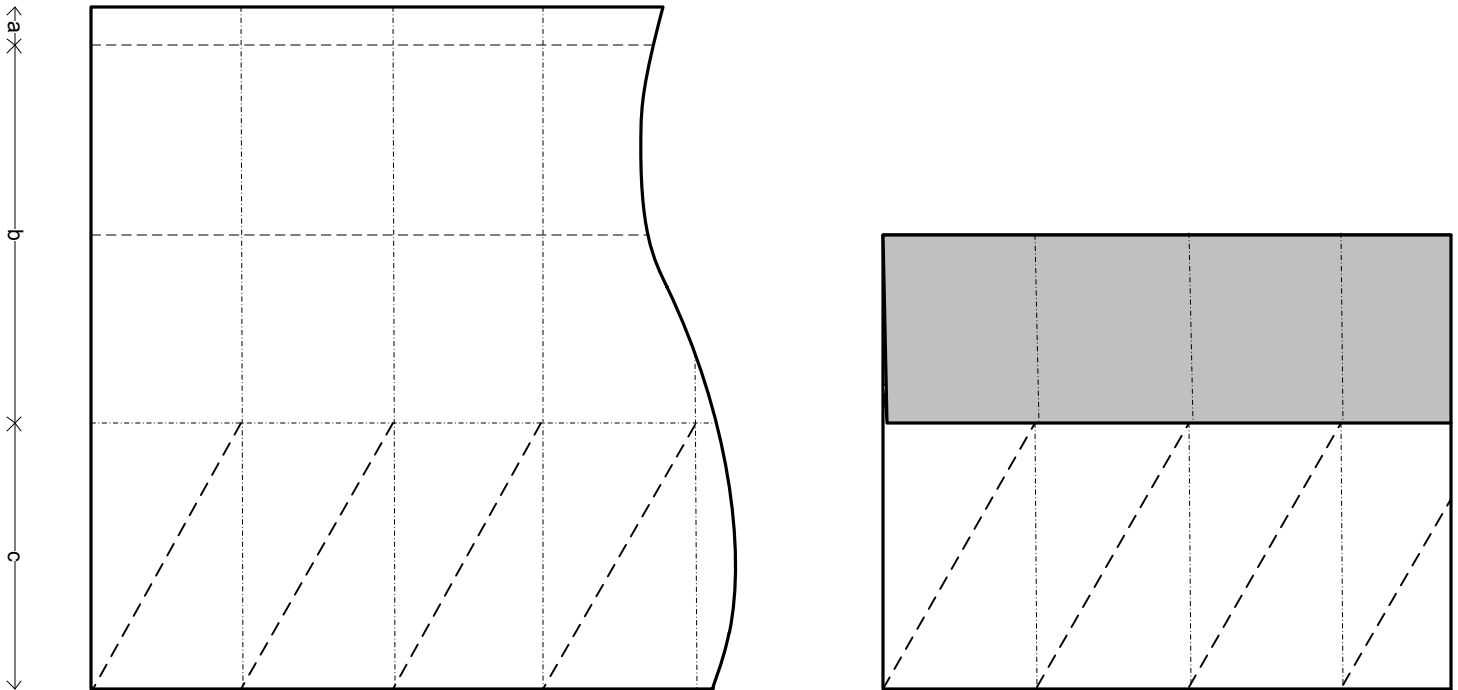
Therefore paper for the box will be 177mm x 330mm

For the lid, choose a 15mm height lid with 31mm width. **a**, **d** and **e** can be the same as the box

Therefore paper for the lid will be 151mm x 341mm

FUSE TWIST BOXES

Basic crease pattern



Section	Description
a	Lip the body section, creating a better friction lock
b	The body of the box/lid. It is a double layer.
c	The twist section

Size descriptions:
 Section **a** should be small. Less than $b/2$. (Typically 10->20 mm is suitable)
 Section **b** should be the desired height of the box/lid X 2
 Section **c** is dependent on the number of sides (**n**) and the width of the side (**w**)

$$c = w * \tan(90 - (180/n))$$

Total Height of paper = $a+b+c$
 Total Width of paper = $(n+1)*w$

Multiplier Table		
n	$\tan(90-(180/n))$	
	4	1.00
	5	1.38
	6	1.73
	7	2.08
	8	2.41
	9	2.75
	10	3.08
	11	3.41
12	3.73	

Example 1.

A 6 sided box 40mm wide and 40 mm high with appropriate lid.
 Choose **a** = 10.
b will be 80 (40 X 2) and **c** will be 69.3 (round to 69)

Therefore paper for the box will be 159mm x 280mm

For the lid, choose a 20mm height lid with 42mm width. **a** can be the same as the box.

Therefore paper for the lid will be 123mm x 294mm

Example 2.

A 10 sided box 30mm wide and 30 mm high with appropriate lid.
 Choose **a** = 10.

b will be 60 (30 X 2) and **c** will be 92

Therefore paper for the box will be 162mm x 330mm

For the lid, choose a 15mm height lid with 31mm width. **a** can be the same as the box.

Therefore paper for the lid will be 136mm x 341mm