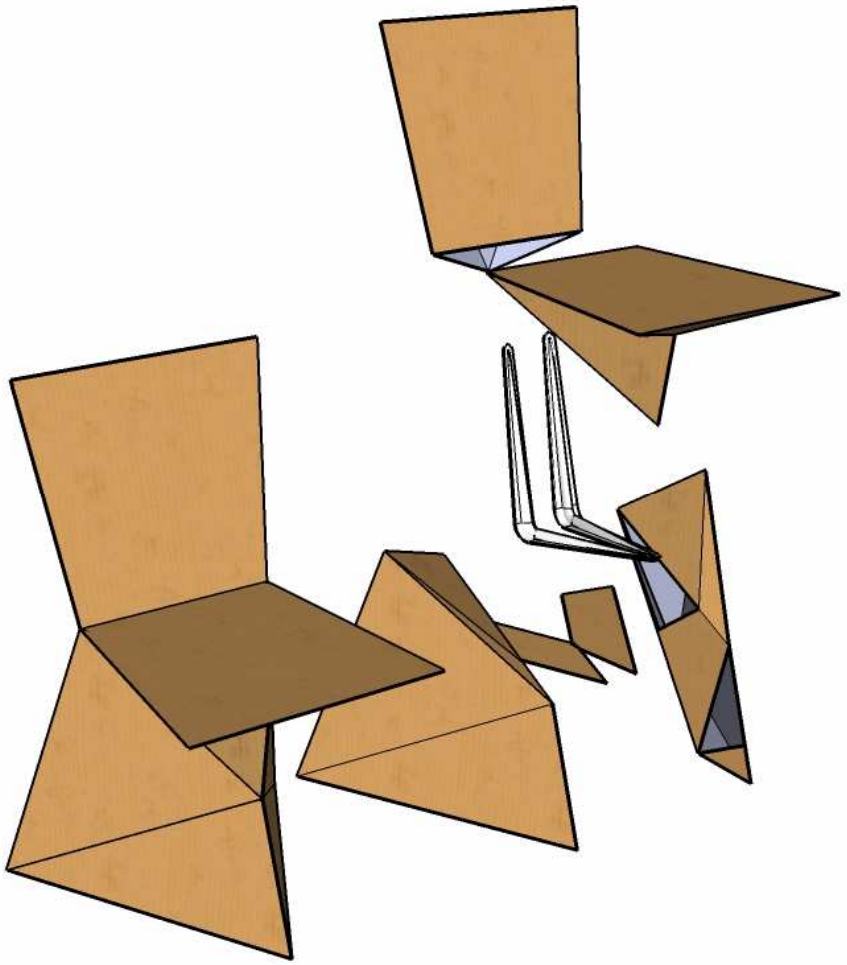
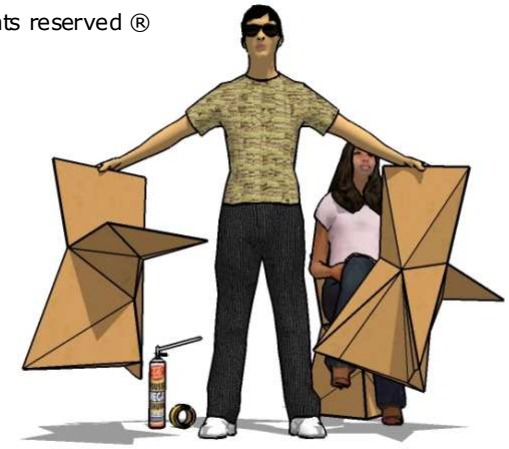
KRAFTWERK (2008), manual DIY cardboard chair



KRAFTWERK (2008), cardboard chair by tom de vrieze - tovdesign // all rights reserved ®



-- this indoor chair is designed only for sitting, no standing.
-- if you are not used to work with the specified materials, ask for help on this
-- because this design is made of cardboard and foam, make sure fire is absent !
-- do not make your animals bite in or eat it
-- do not clean this design with water or other liquids

-- DIY plans : further information
you are entitled to build 1 functional and good design, the plans are not for resale and are not to be resold or given away.

-- DIY plans : liability
every effort has been made to ensure that the information given, the design and plans in the manual are as accurate as possible. the plans have been used to build the design without any need for amendment or change. as you are the builder, the implementation of the methods of building and actual building of the design as described in the plans manual are beyond our control. therefore we cannot be held liable for any incidental or consequential damage resulting from the use of the information, building methods, plans or the design as described in the plans manuals.

-- DIY plans : refund policy
due to the nature of the product and the easy copying of the same we cannot offer refunds after purchase.

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2. specifications

indoor stool 'kraftwerk' (2008), cardboard chair filled with polyurethane foam.
weight : 1,8 kg / 3.97 lb
maximum load 95 kg / 209.4 lb
W×H×D : 510 × 844 × 566 mm / 20.08 x 33.23 x 22.28 in

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3. materials

a. cardboard 4 mm / 0.16 in, total surface : about 4,00 m² / 128.3 in²
that are about 2 cardboard boxes of 75 x 45 x 50 cm / 29.53 x 17.72 x 19.69 in

b. 1 bottle PUR expansion foam 750 ml / 25.36 oz

c. 1 (spare)bottle PUR expansion foam 100 ml / 3.38 oz

d. kraftpaper tape 50 mm / 1.97 in

e. 2 london brackets size 300 x 350 mm / 11.81 x 13.78 in

f. 1 aluminium blind rivet that fits the london bracket hole.

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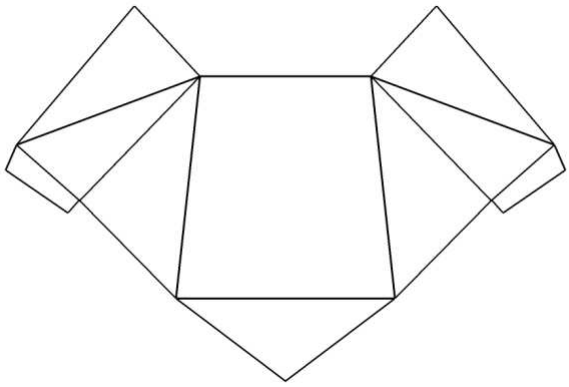
4. downloaded files

these are the files you downloaded at www.tovdesign.com/kraftwork

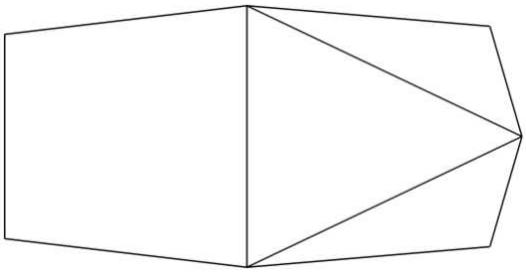
manual

part a

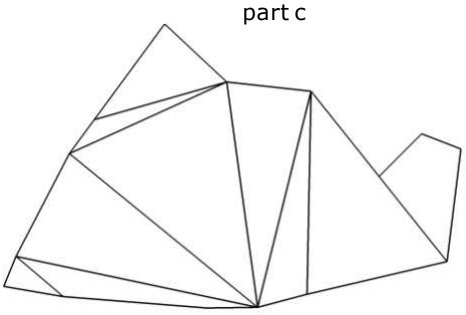


part d

part b



part c



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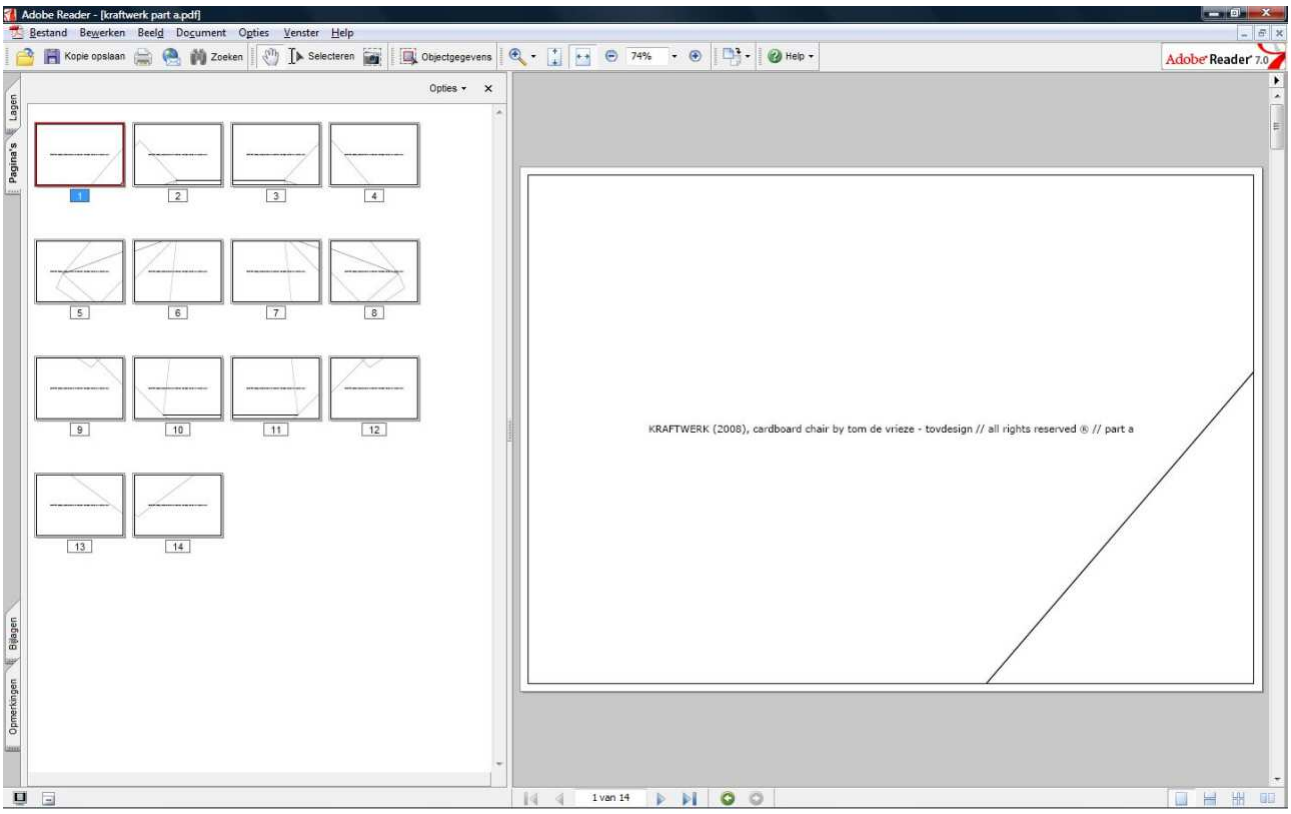
5. printing, cutting and folding

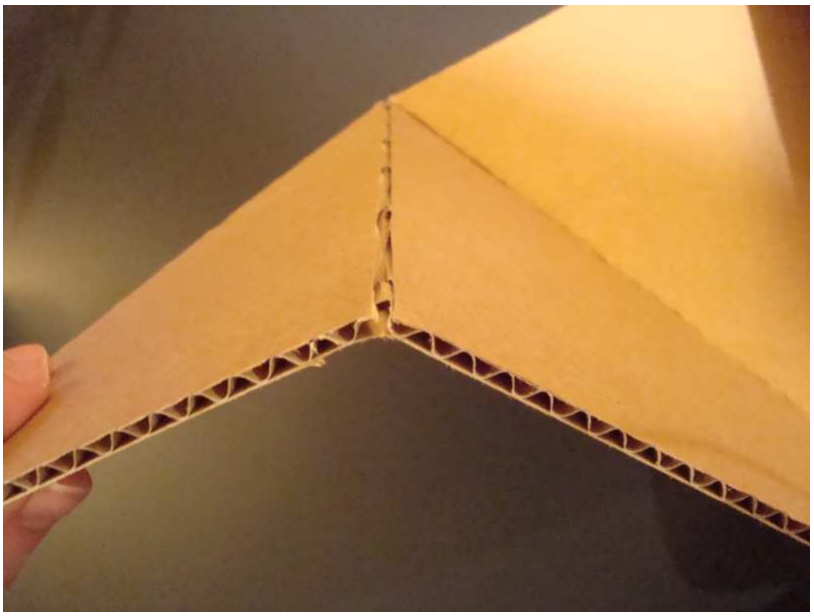
here is a print screen shown of the pdf file 'part a'.
you will notice in this case 14 A4/letter-pages, print them on your printer with scale 1:1. do the same for part b until d.



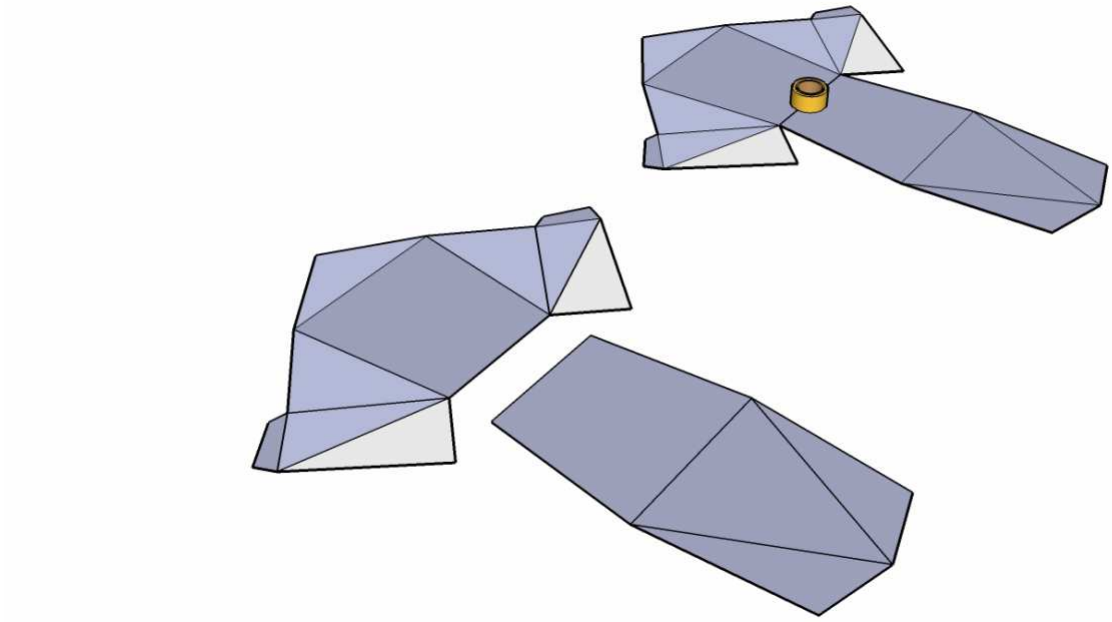
-- 5.1 : incisions

puzzle the A4/letter-formats (don't forget to cut off the margin lines !) into a template, as shown in 'downloaded files', place each template on a cardboard, draw the outlines, and mark the incision lines (that are the lines in the surface). remove the template and now you can draw the incision lines. cut the 'incisions', no cut through (see image below as sample). you only need a cut through for the outlines.

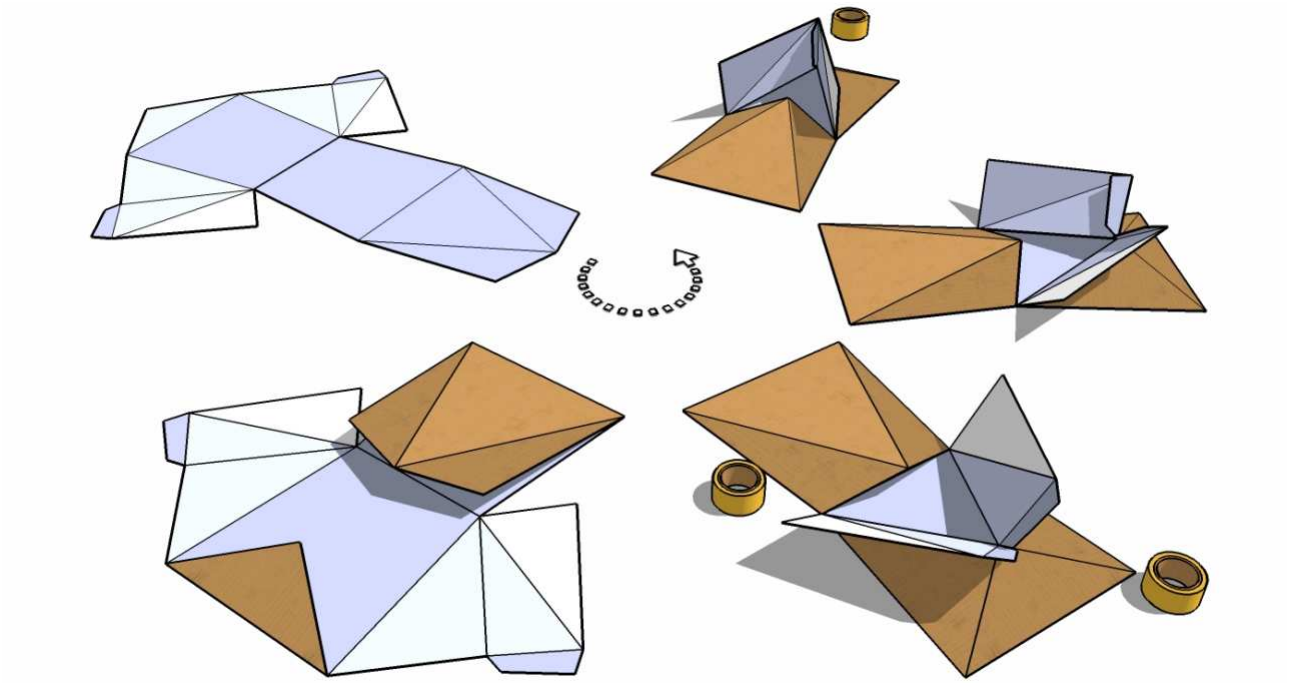
when template part c is made, turn it around to make a mirrored part. this we call part 'c_mirrored'



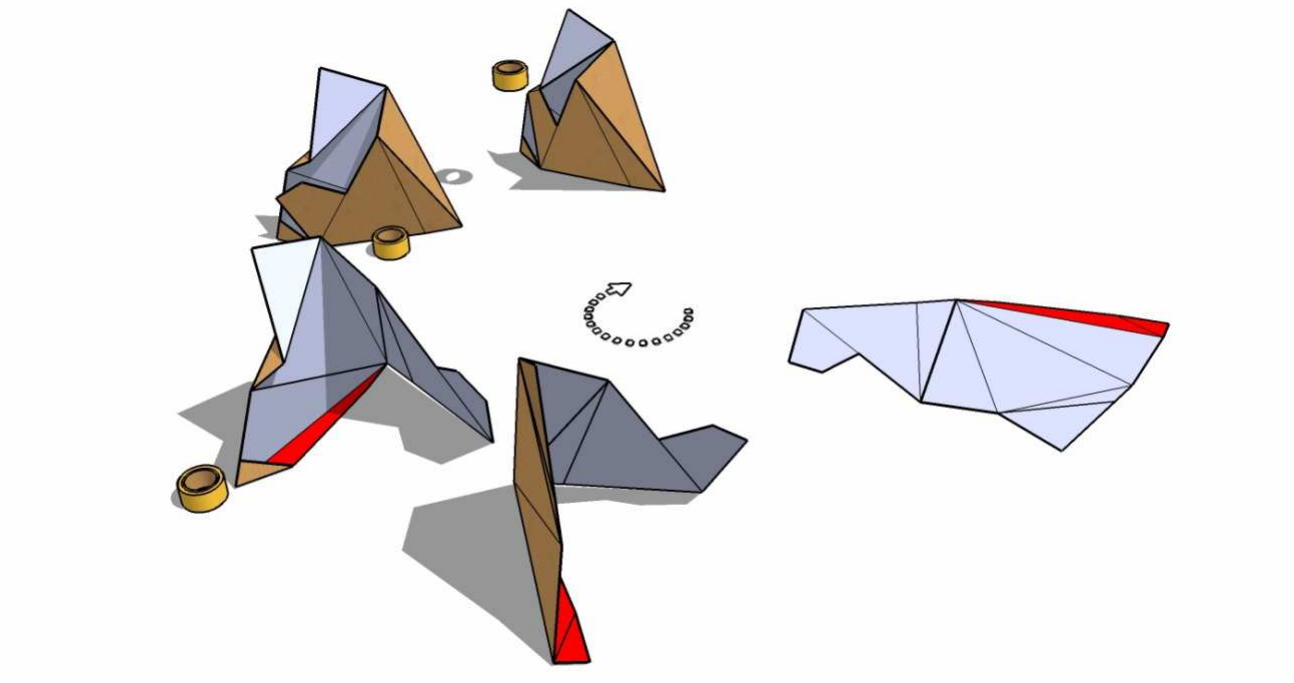
-- 5.2 : tape cardboard part a and b together, only at the inside !
(the tape symbol shown here means 'tape all over the length')



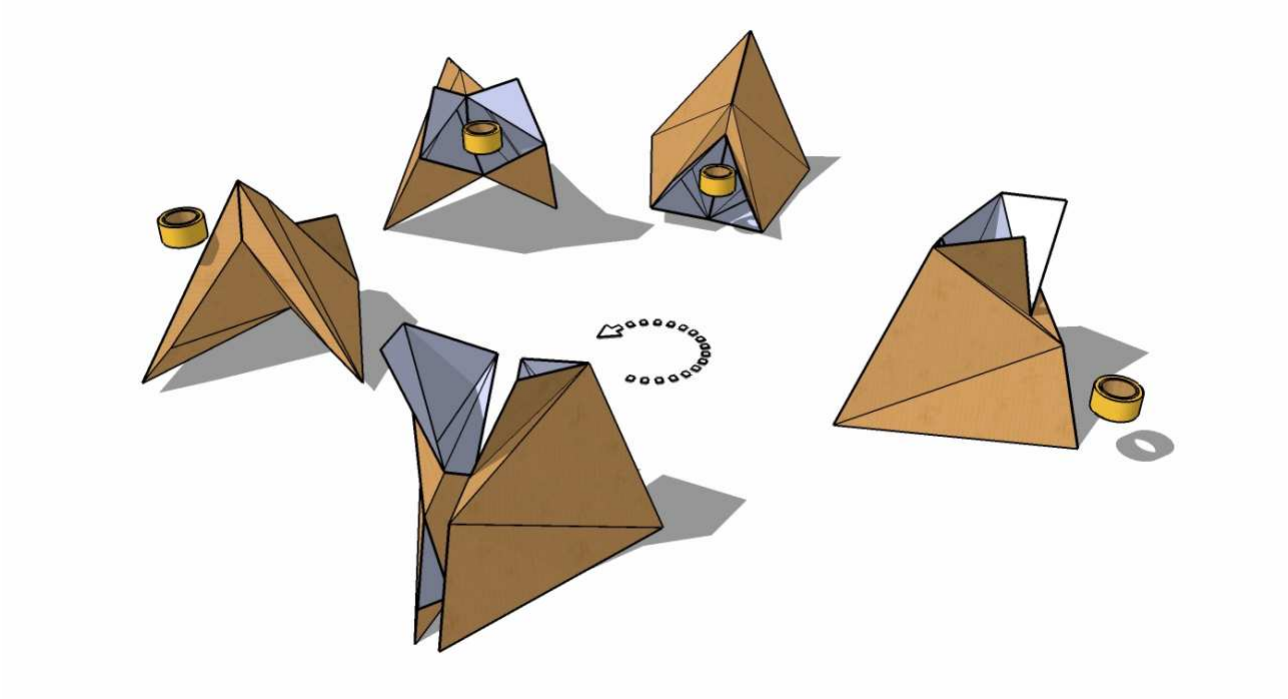
--5.3 : start folding cardboard part a and b, and tape where you see the tape symbol
(follow the arrow in the middle for each folding step)
important : always fold in a way that the incisions are on the inside !
that way the incisions are not visible at the outside and the chair is stronger



--5.4 : start folding cardboard part c, and tape where you see the tape symbol
(follow the arrow in the middle for each folding step)
important : always fold in a way that the incisions are on the inside !
that way the incisions are not visible at the outside and the chair is stronger



--5.5 : tape part c and c_mirrored together where you see the tape symbol
(follow the arrow in the middle for each folding step)
make sure to tape enough and strong !



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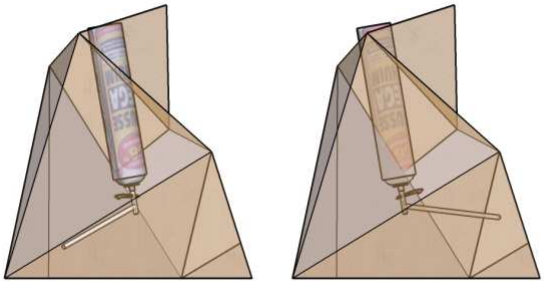
6. brackets and foaming

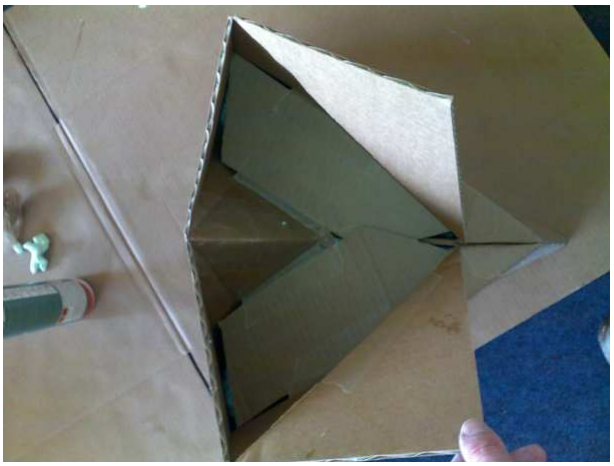
fasten the london brackets together with blind rivet **on the longest length** !
this is the 350 mm / 13.78 in length

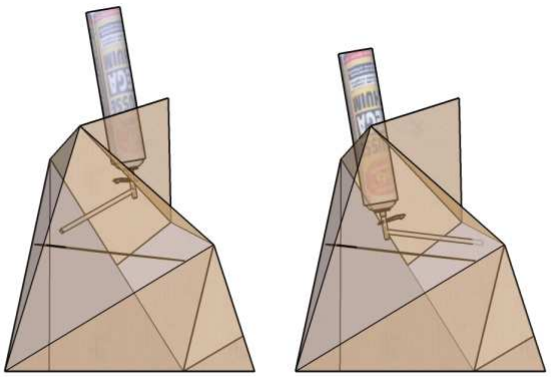
--6.1 : before foaming, read 9 !

--6.2 : foam the base about the height the bottle shows

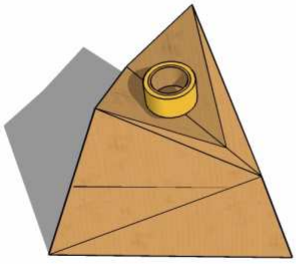


--6.3 : insert and tape part d (2 times) and foam again about the height the bottle shows

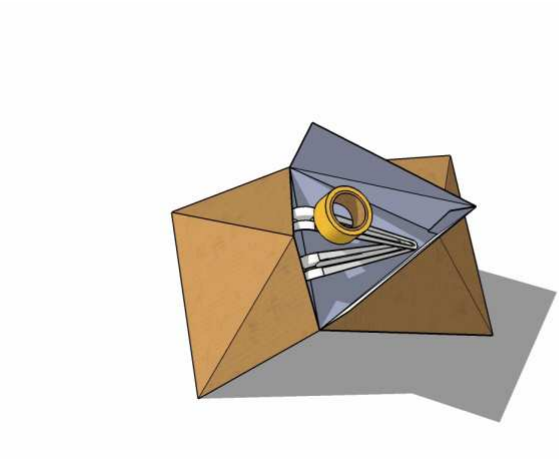




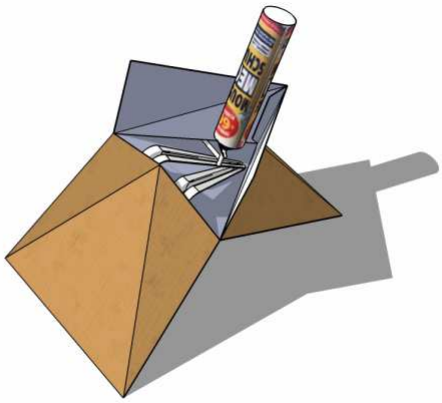
--6.4 : after foaming, close the base and tape it immediately

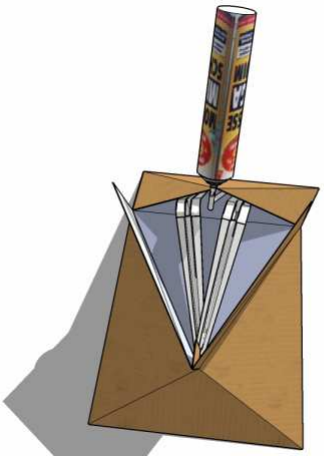


-- 6.5 : tape the fastened brackets in part a/b as shown here.

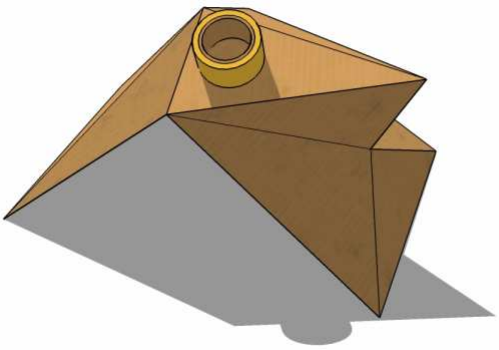


--6.6 : foam as the bottle shows, the outer corners are very important !





--6.7 : after foaming, close the base and tape it immediately



7. tape and drying

--7.1 : tape top and base together (this photo shows the start of taping) make sure to tape enough and strong !
do not dry top and base separately, tape them immediately together after the foaming.

--7.2 : let the chair dry in a ventilated workspace for 2 days !

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8. adjusting

--8.1 foamed too little
it may occur that the chair will give way at some places, the first time when you use it.
this means the foaming was not good at that spot. you can make an incision and refill it where needed.
be careful, the foaming finds its way out fast ! to prevent this, put immediately a small rag into it after the foaming.
after drying remove the rag and tape the incision.

--8.2 foamed too much :
cut away like a sculptor the much part, replace it with new cardboard and tape

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9. remarks on foaming

-- read carefully the guidelines on the bottle PUR expansion foam
-- make sure to work in an appropriate, ventilated environment
-- it is a sticky material, make sure to wear appropriate clothing
-- do not fully foam the chair, it will blow up as you see on a trial here
-- always foam no more than the half of what should be foamed