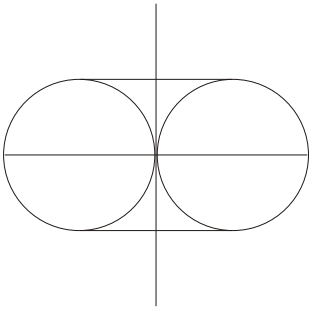
Cover Page

Internal 'Clockwise' Rotating Central Assembly

'X2' Prototype Part Construction

Workshop Schematics

12 (twelve) pages **including cover page**



Contents

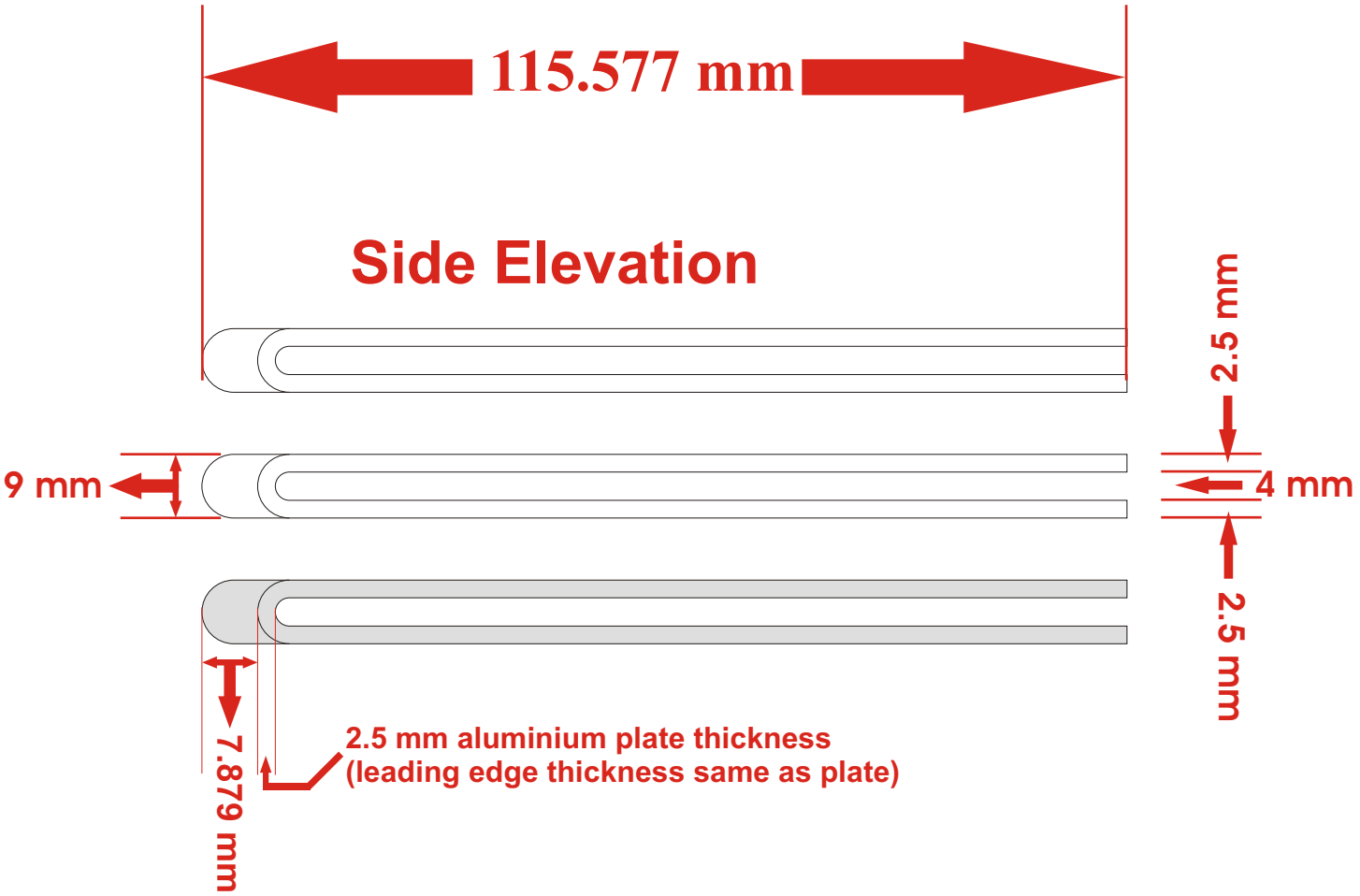
Red lines & text: represent measurement, angular lines of interaction, angular degrees, thickness lines, design lines and technical information / specification.

Black lines: represent actual shape and final component design to be machined.

All drawings are actual size, background page size is A4 or 21 cm x 29.7 cm.

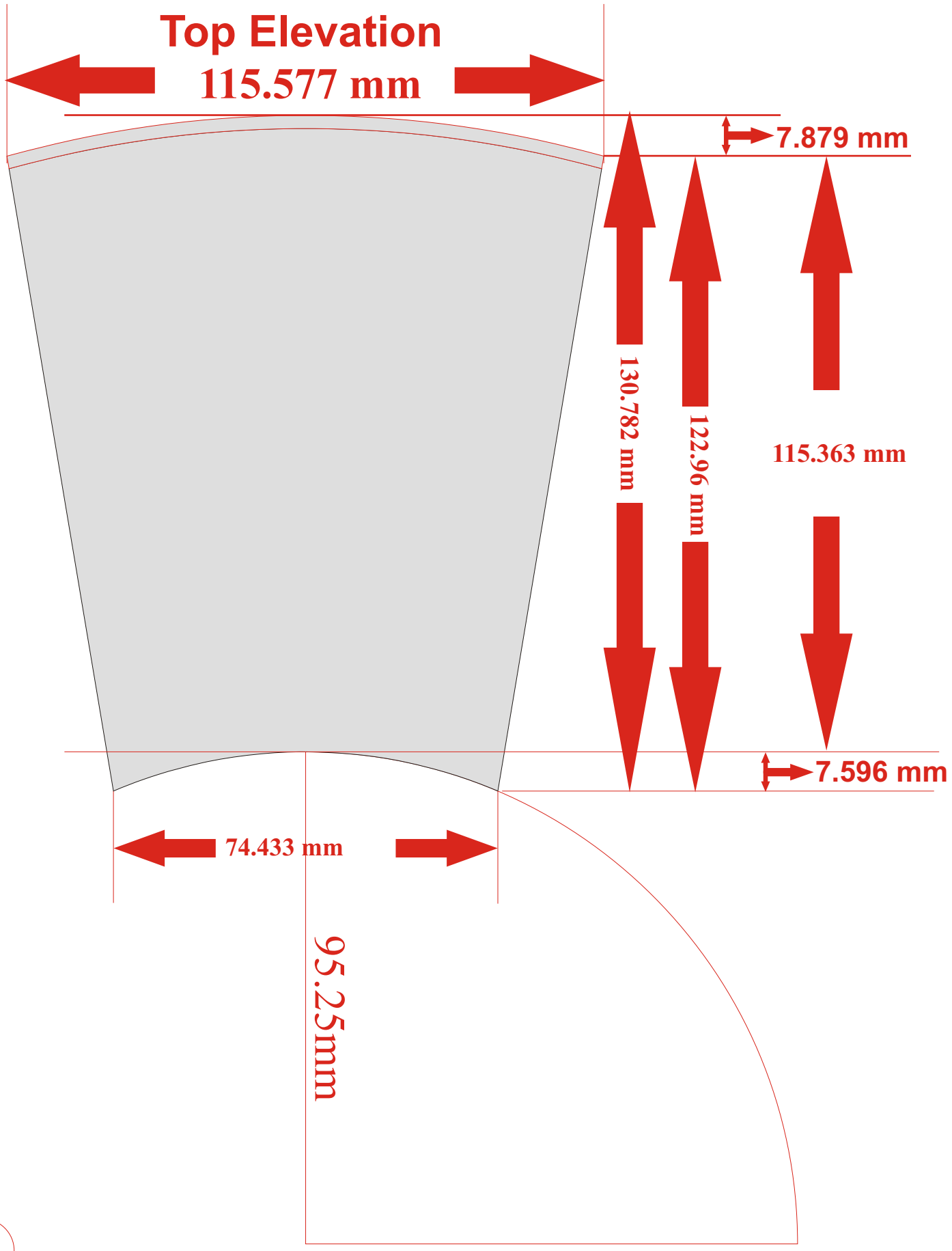
X2 - Capacitor Plate x 6 - pg - 1

(Machine Shop Design Schematic)



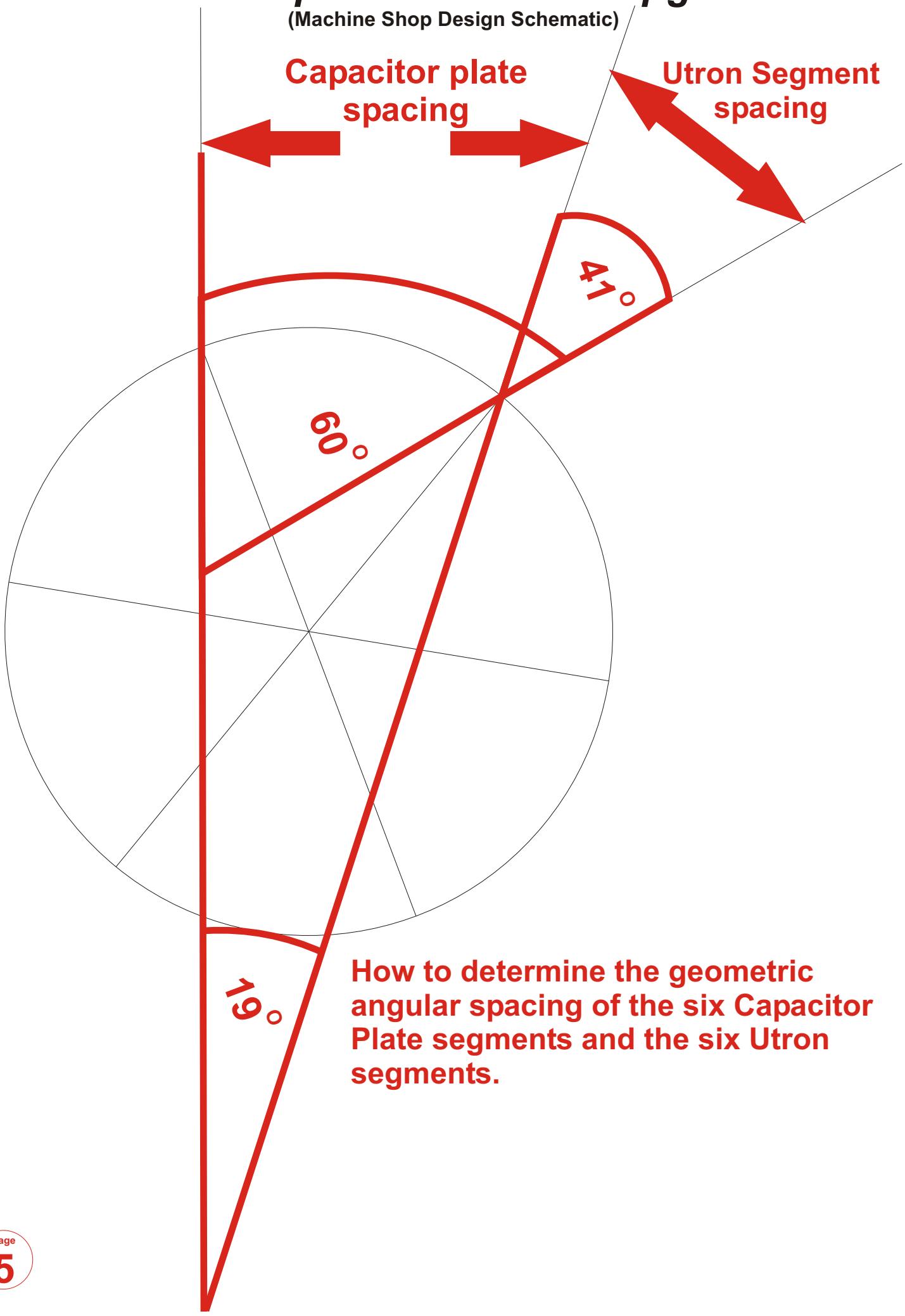
X2 - Capacitor Plate x 6 - pg - 2

(Machine Shop Design Schematic)



X2 - Capacitor Plate x 6 - pg - 3

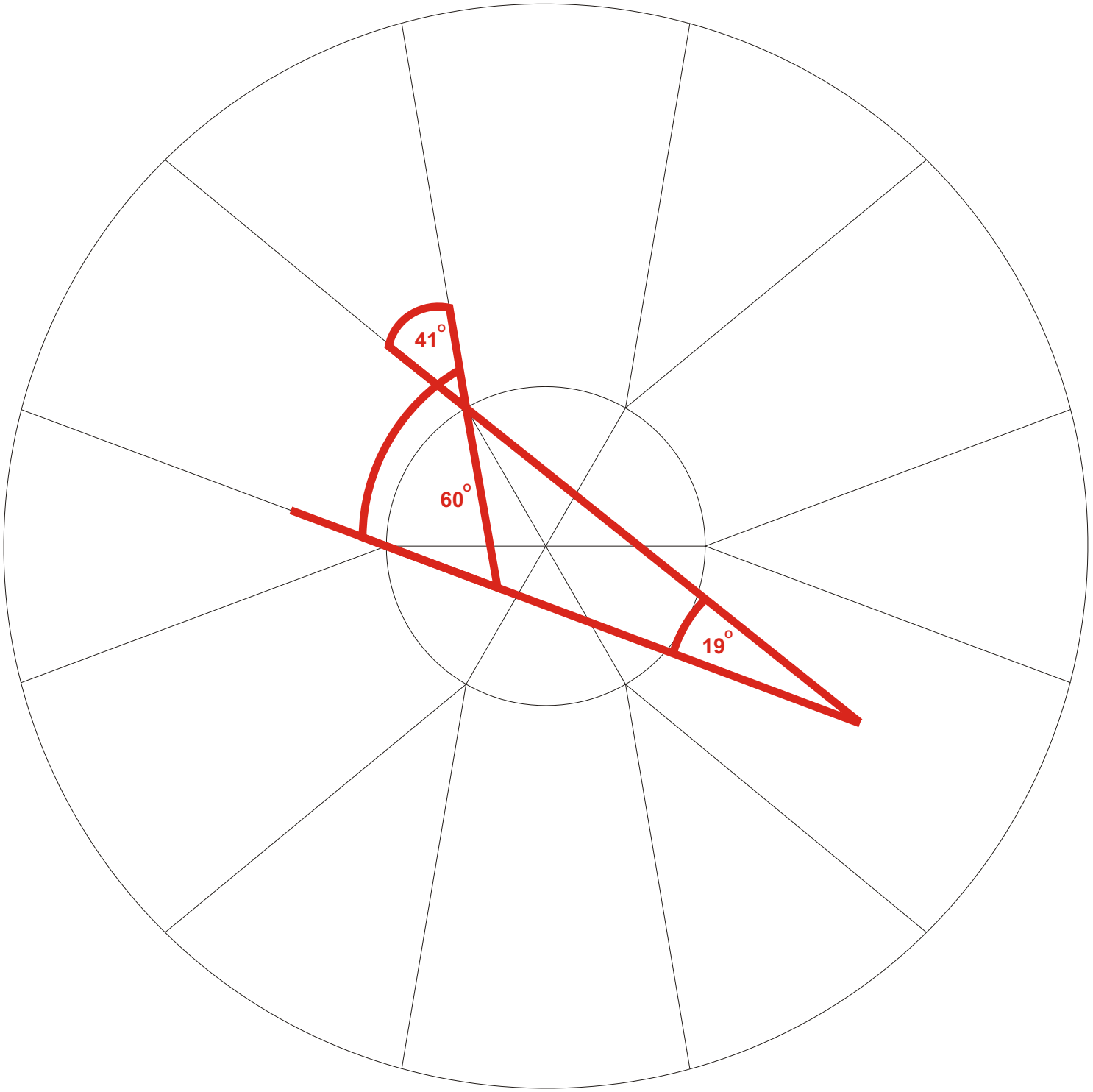
(Machine Shop Design Schematic)



How to determine the geometric angular spacing of the six Capacitor Plate segments and the six Utron segments.

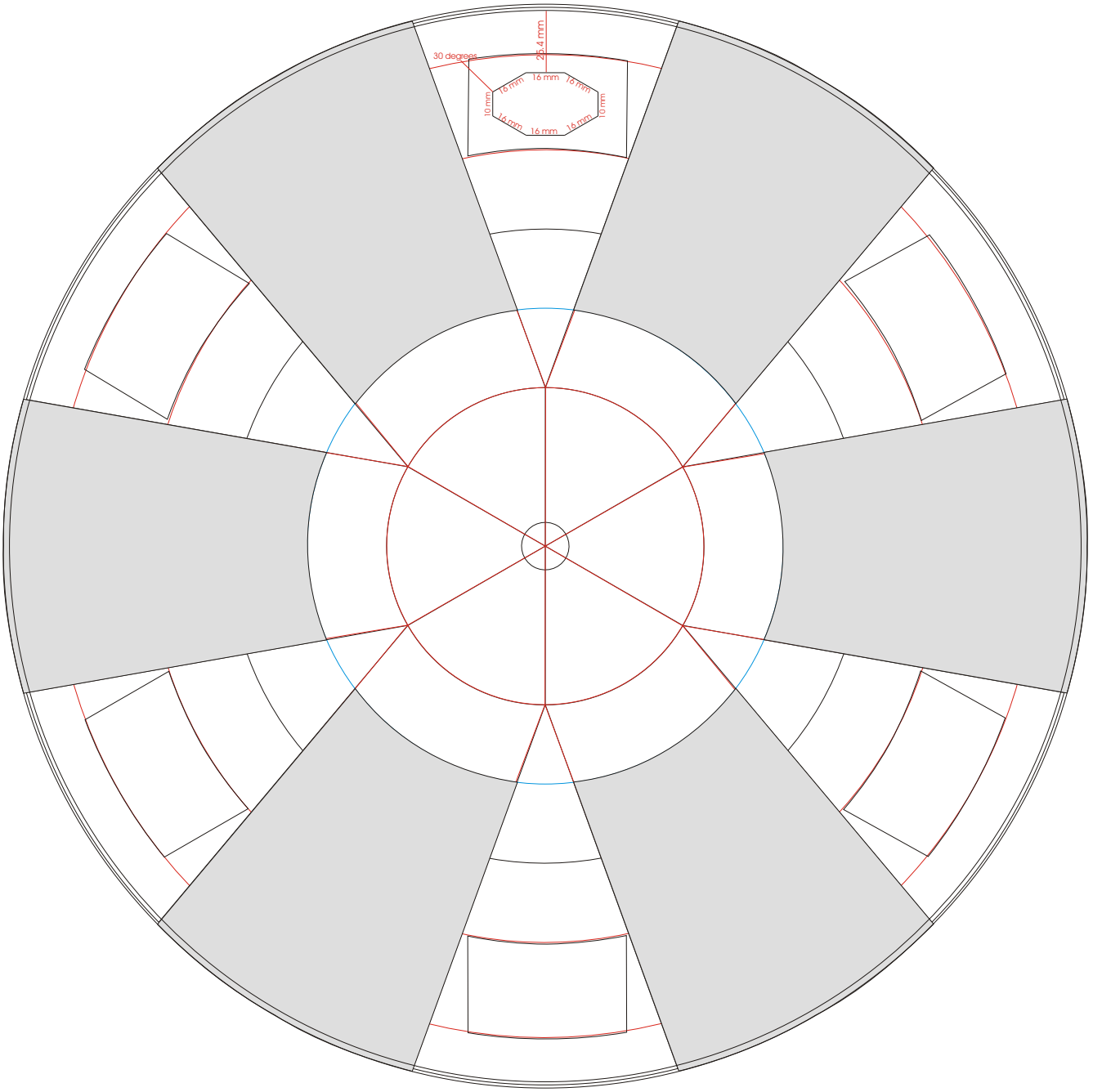
X2 - Capacitor Plate x 6 - pg - 4

(Machine Shop Design Schematic)



X2 - Capacitor Plate x 6 - pg - 5

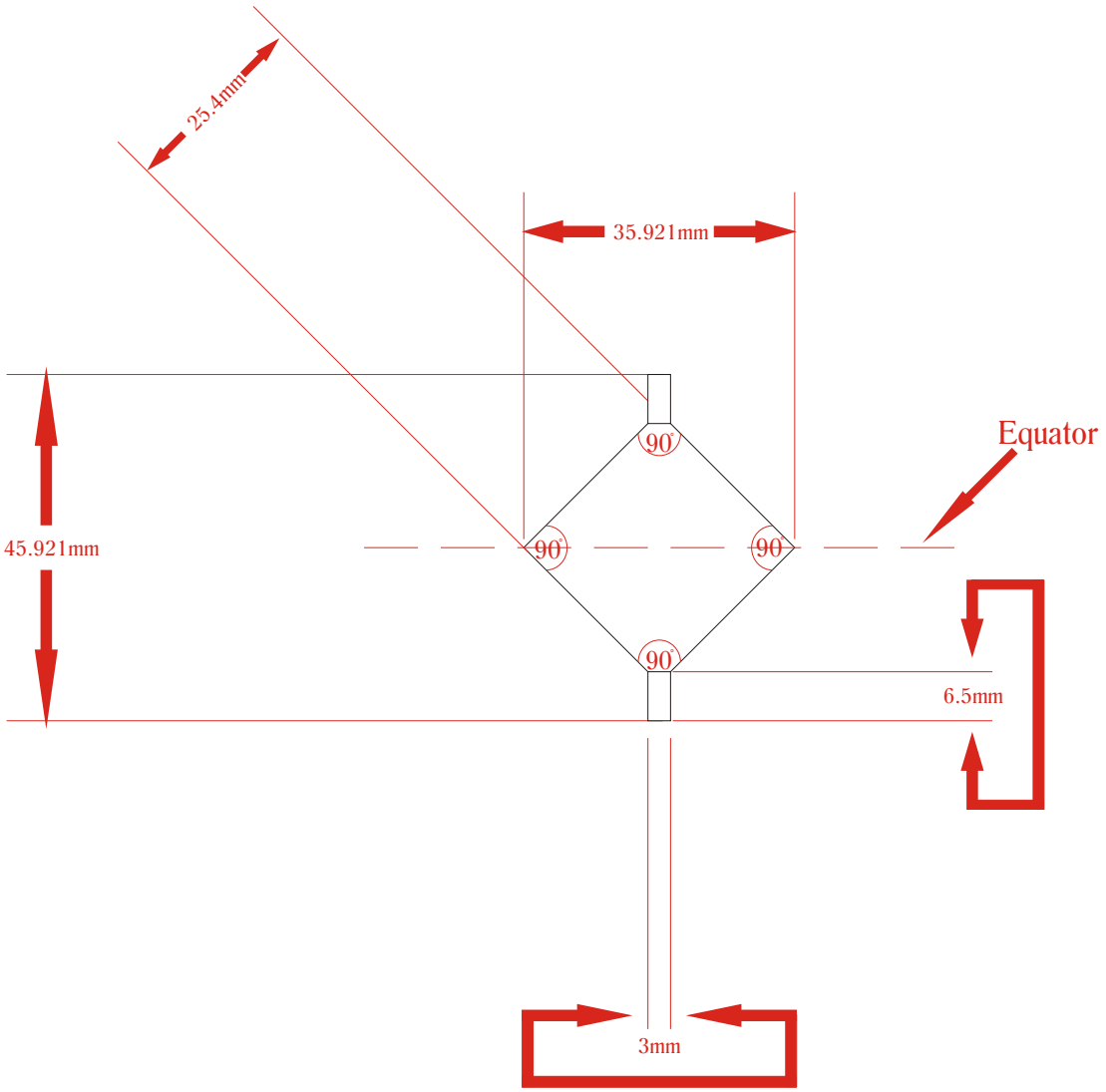
(Machine Shop Design Schematic)



Inner assembly, need circumference adjustment for 2.5mm recess to fit inlayed capacitor plate.

X2 - Outer Utron x 6

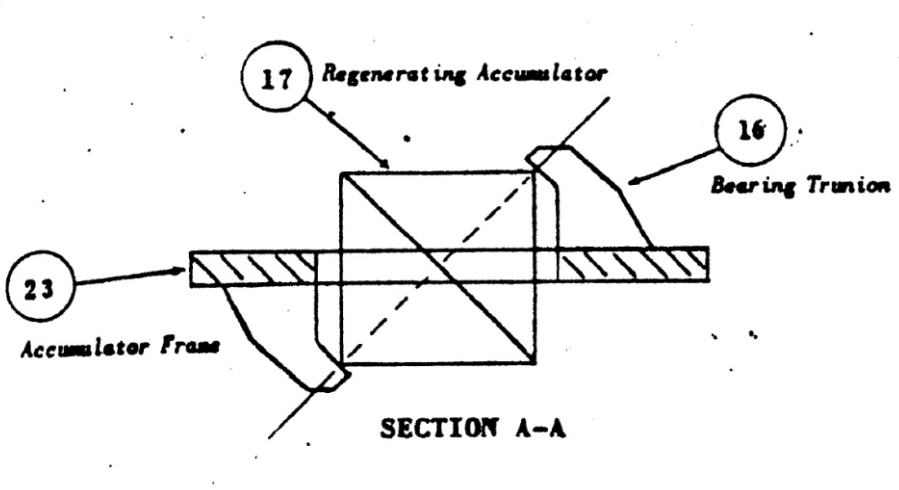
(Machine Shop Design Schematic)



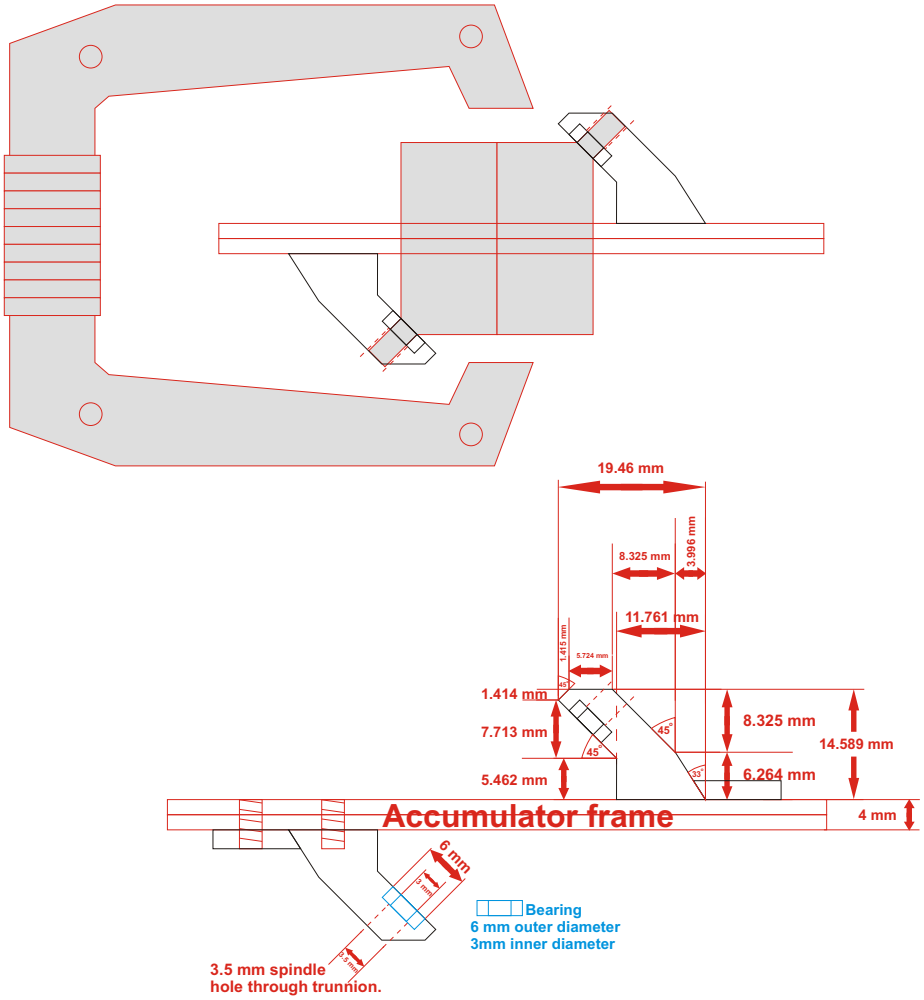
All one piece, double cones including spindle.

X2 - Trunnion x 12 - pg - 1

(Machine Shop Design Schematic)

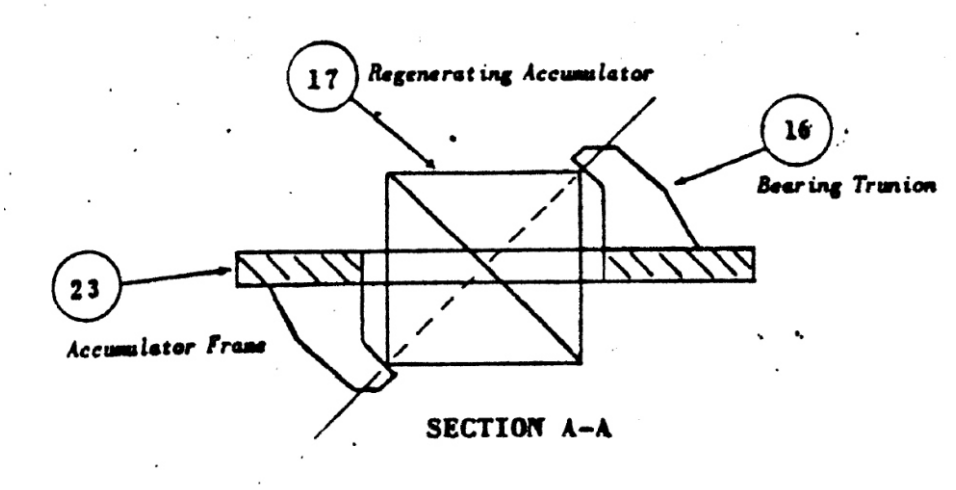


Side elevation

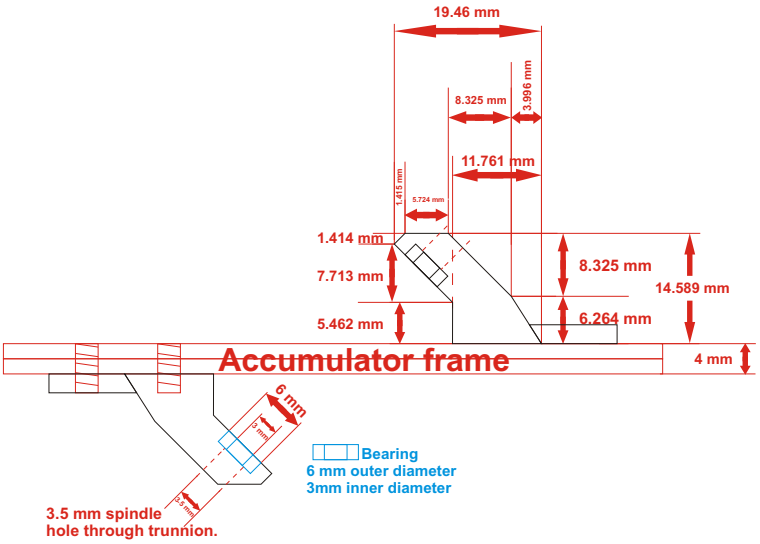


X2 - Trunnion x 12 - pg - 2

(Machine Shop Design Schematic)



Side elevation

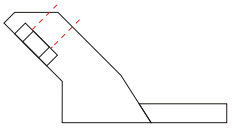


Trunnion Bearing

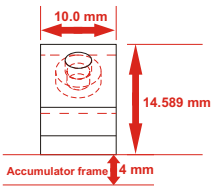
Outer diameter
W - 6 mm x H - 2 mm
Center hole
W - 3mm x H - 2mm.

W - 3.5mm hole on top of bearing through trunnion, in counter - sunk arrangement with bearing, for the Utron spindle to fit in and free spin.

Side elevation

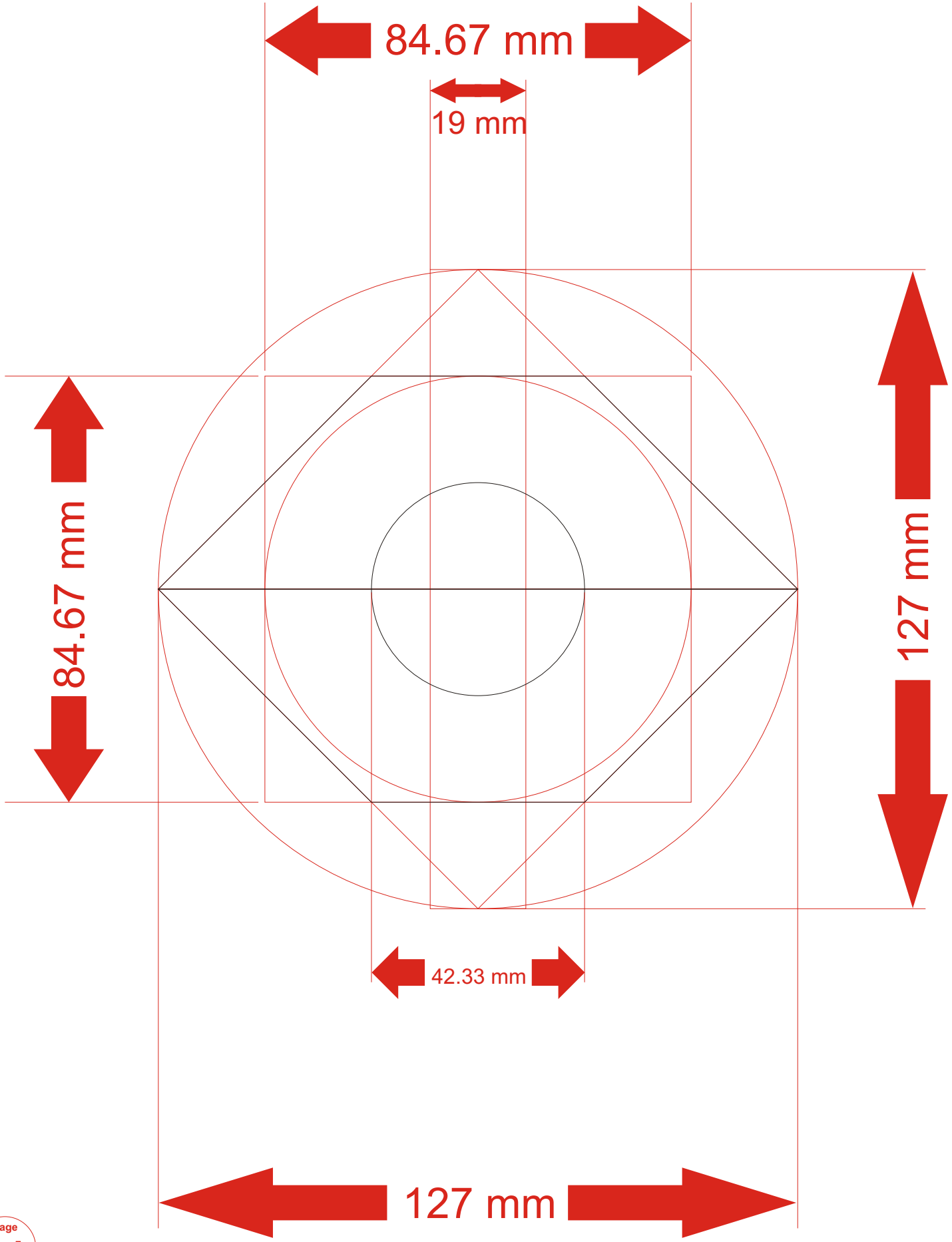


End elevation



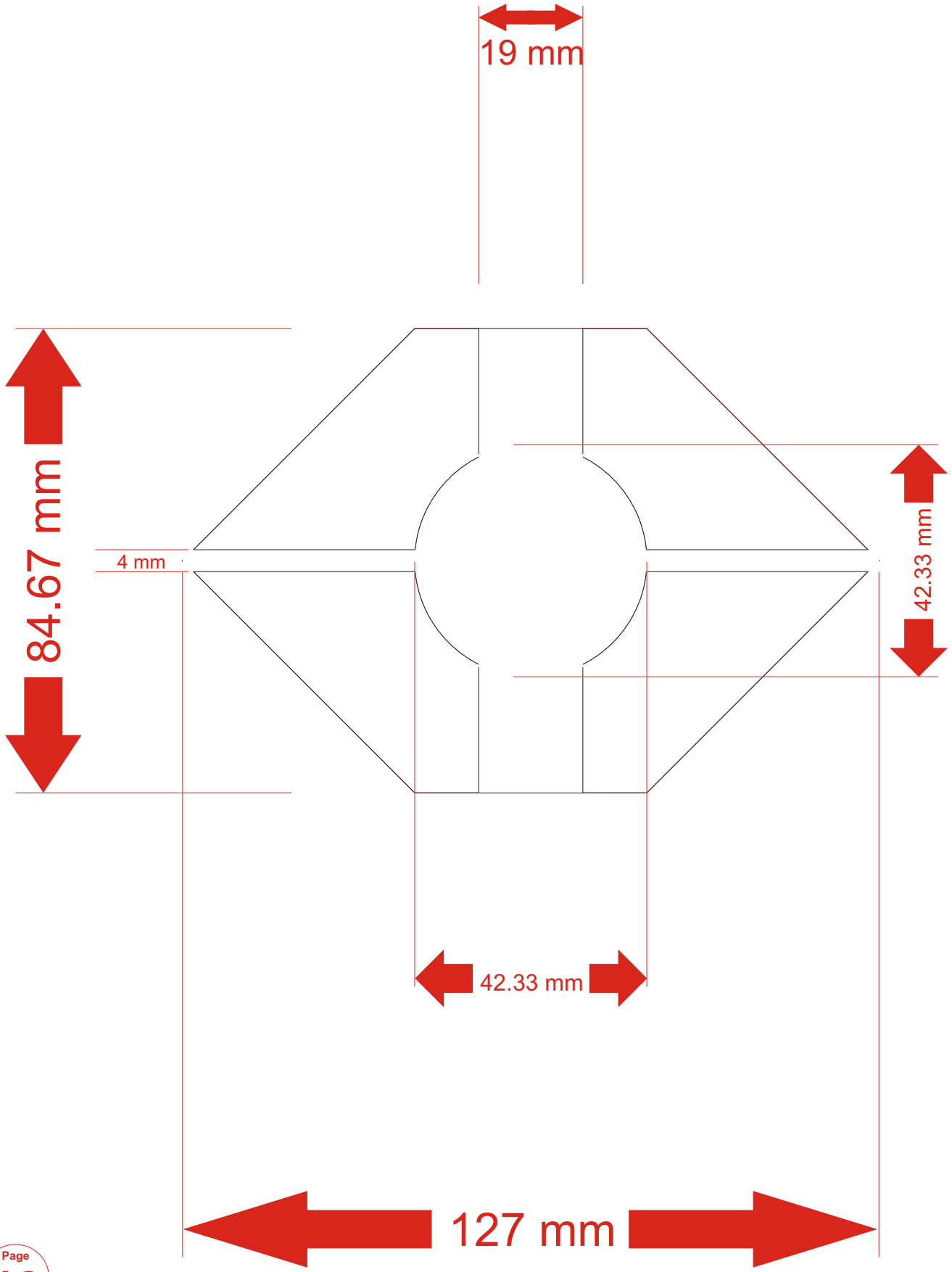
X2 - Central Accumulator - pg - 1

(Machine Shop Design Schematic)



X2 - Central Accumulator - pg - 2

(Machine Shop Design Schematic)



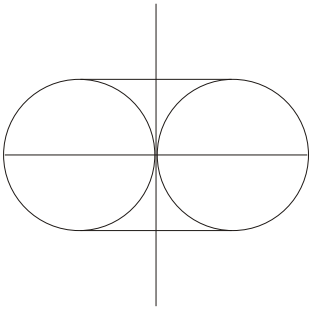
Cover Page

External ‘Counter - Clockwise’ Rotating Frame Work Assembly

‘X2’ Prototype Part Construction

Workshop Schematics

22 (twenty two) pages **including cover page**



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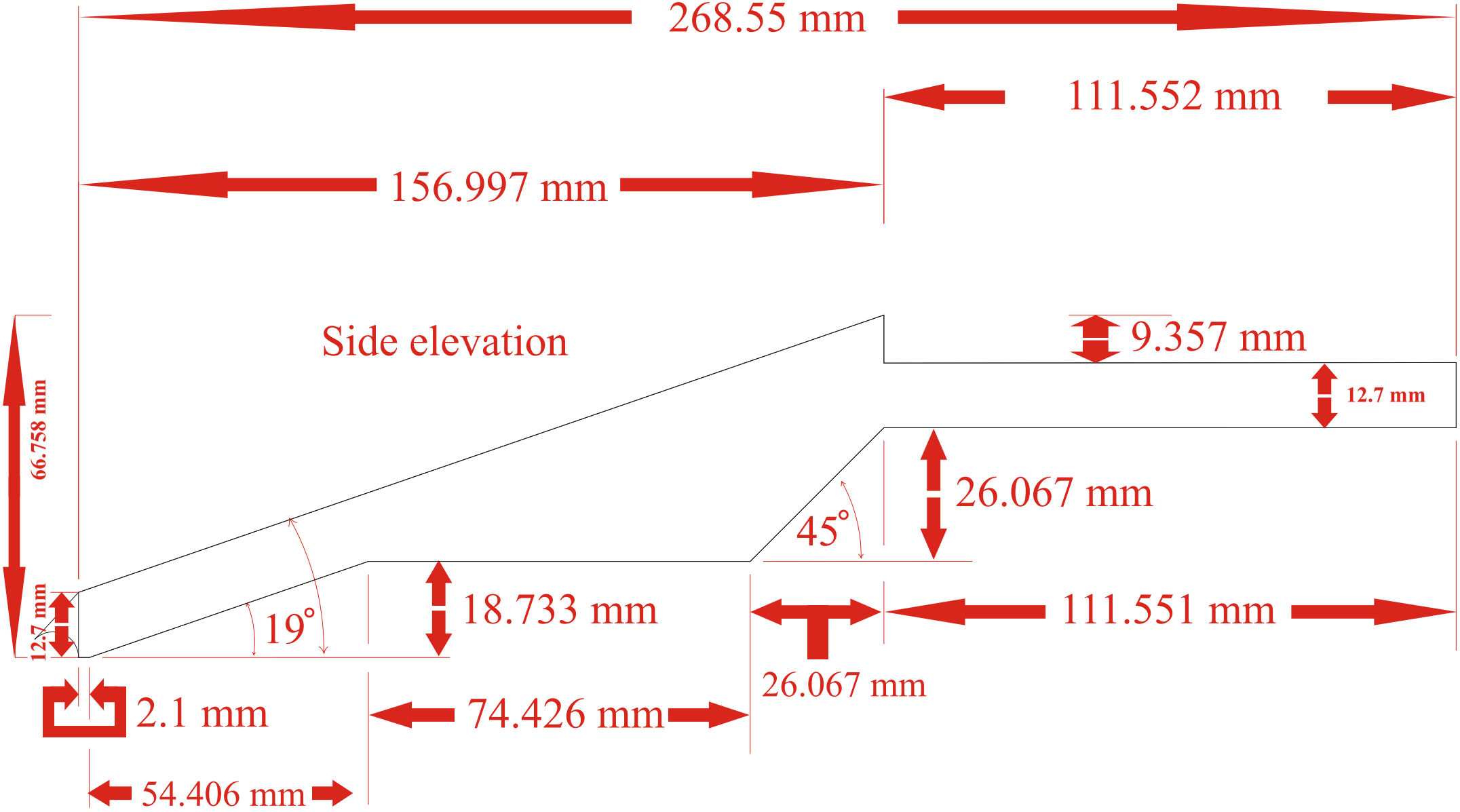
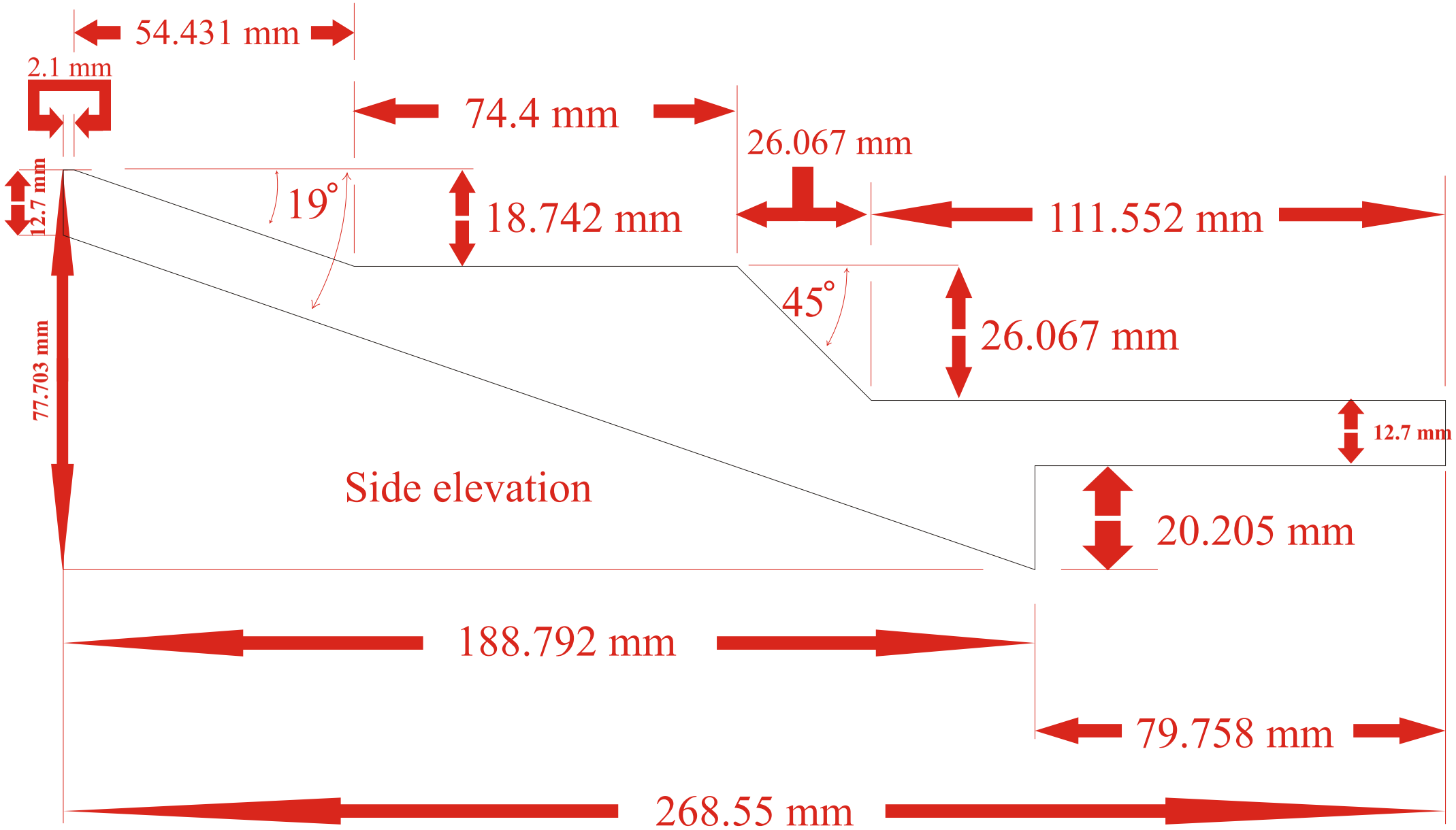
X2 - Hull (Top Rib / Cab Support) x 12

(Machine Shop Design Schematic)



X2 - Hull (Bottom Rib / Landing Gear Support) x 12

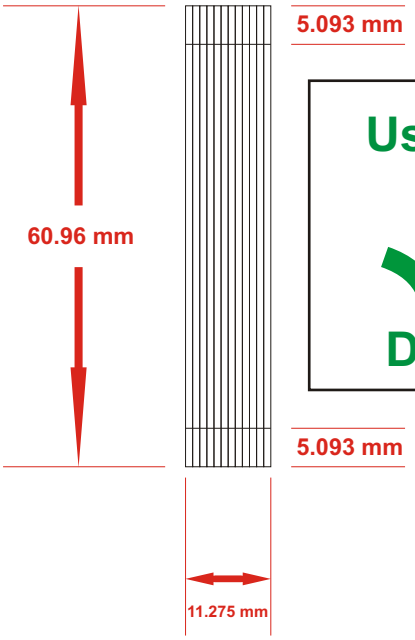
(Machine Shop Design Schematic)



X2 - ‘C’ Magnet x 12

(Machine Shop Design Schematic)

End Elevation

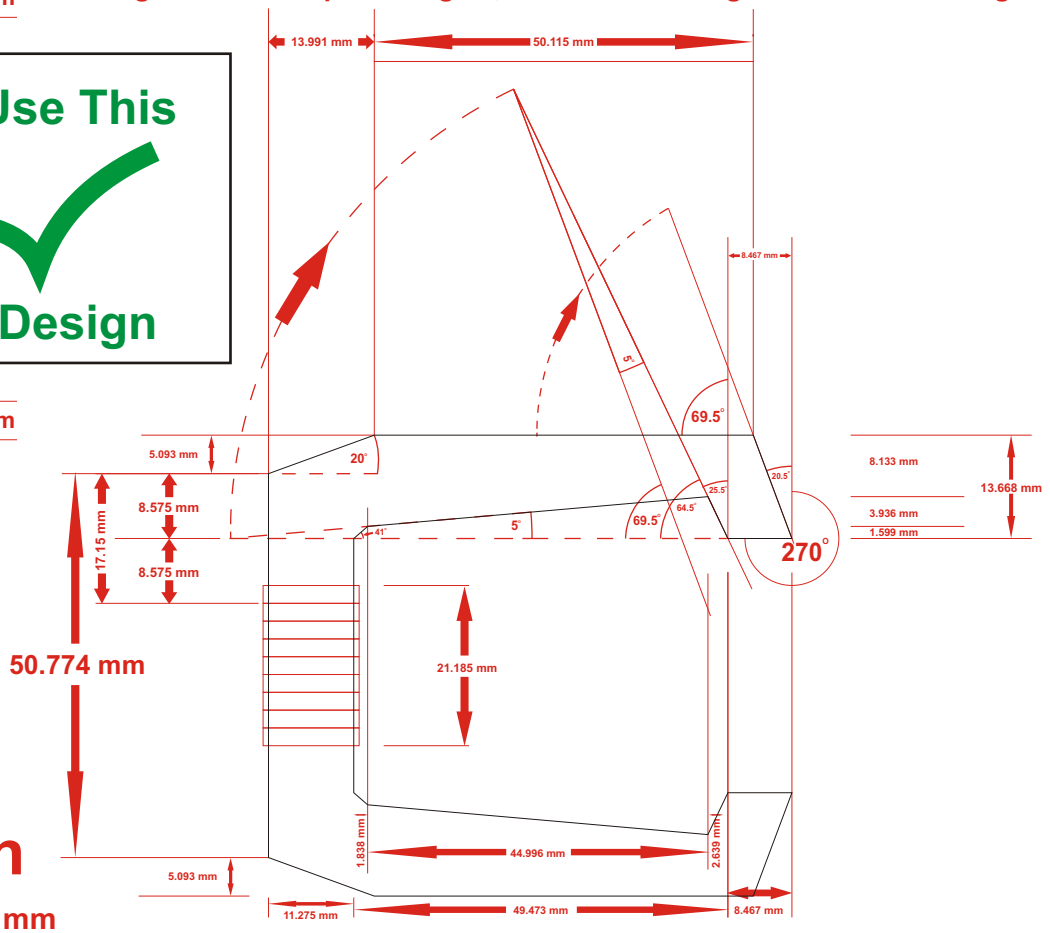


Use This

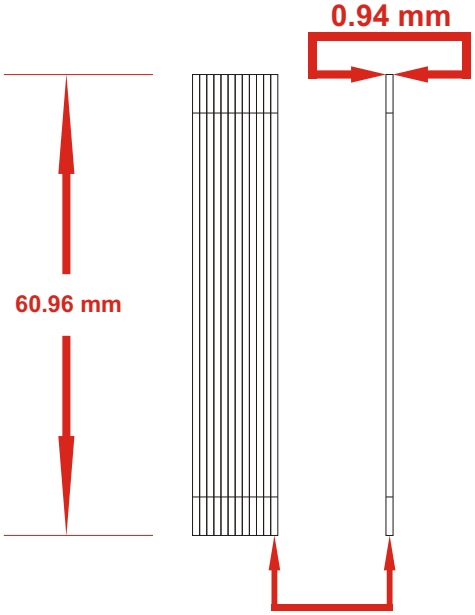
Design

Side Elevation

(full measurement / angles for ‘one [1]’ plate constructed in one piece. All plates are identical and each constructed in ‘one [1]’ piece. This design is for a one piece magnet, with the coil being wound onto the magnet)



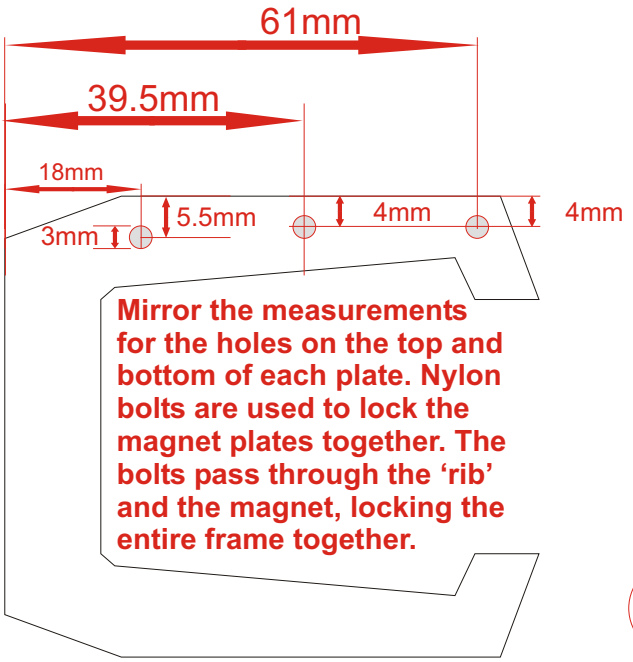
End Elevation



The above diagram represents the ‘end elevation’ of ‘one (1)’ plate, which together with the other ‘eleven (11)’ identical plates form a set, which intern, forms ‘one (1)’ complete magnet.

Magnet holes

(Machine Shop Design Schematic)

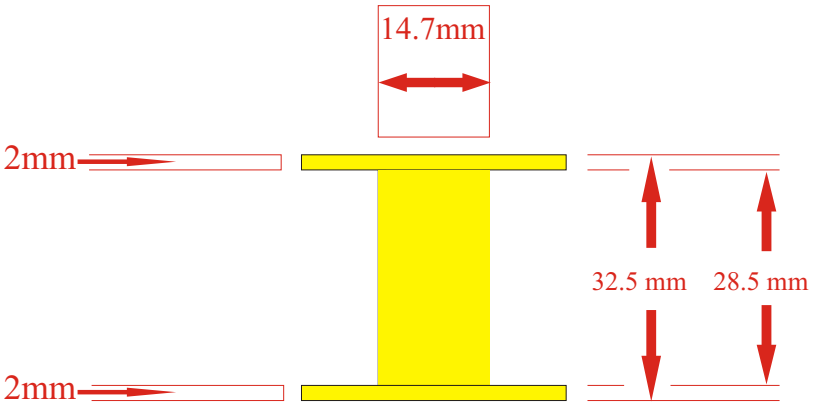


Mirror the measurements for the holes on the top and bottom of each plate. Nylon bolts are used to lock the magnet plates together. The bolts pass through the ‘rib’ and the magnet, locking the entire frame together.

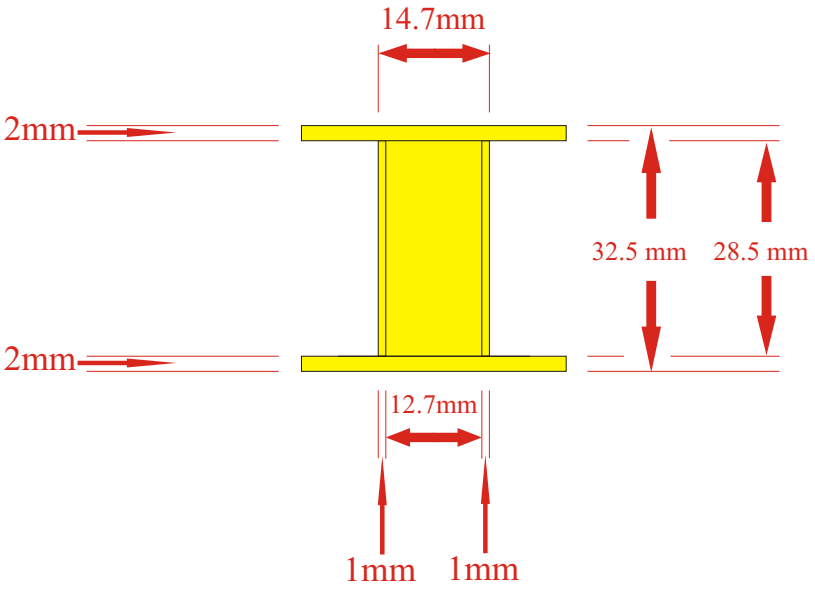
X2 - 'C' Magnet Coil Former x 12

(Machine Shop Design Schematic)

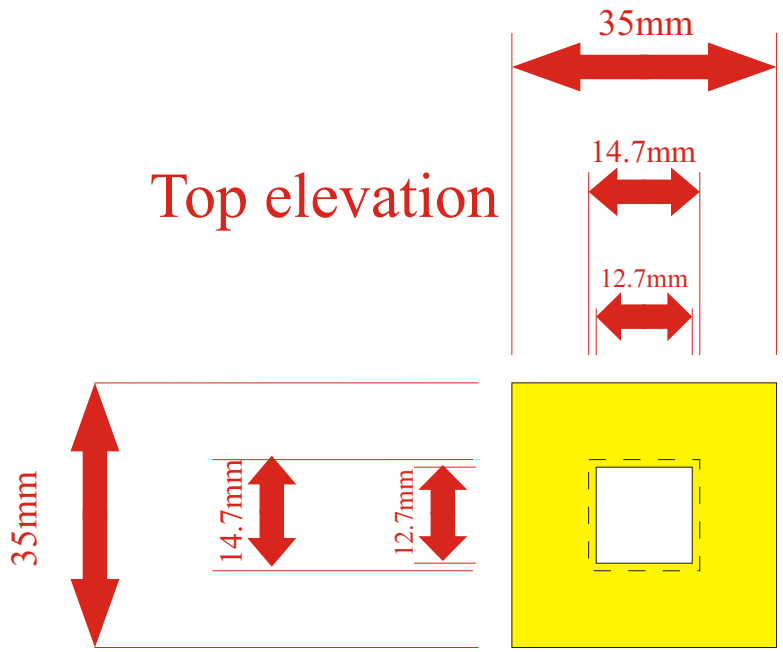
Side elevation



Side cut through elevation

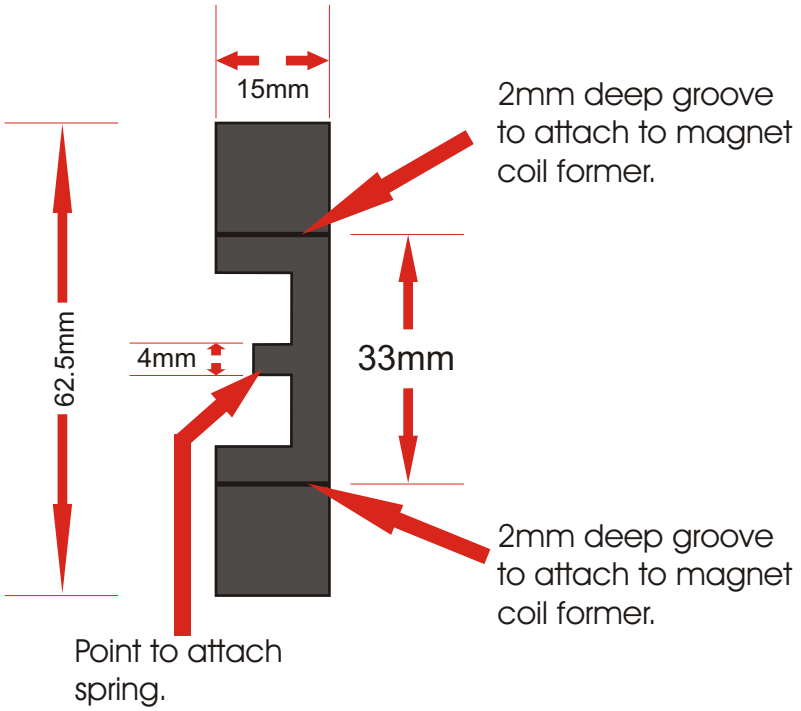


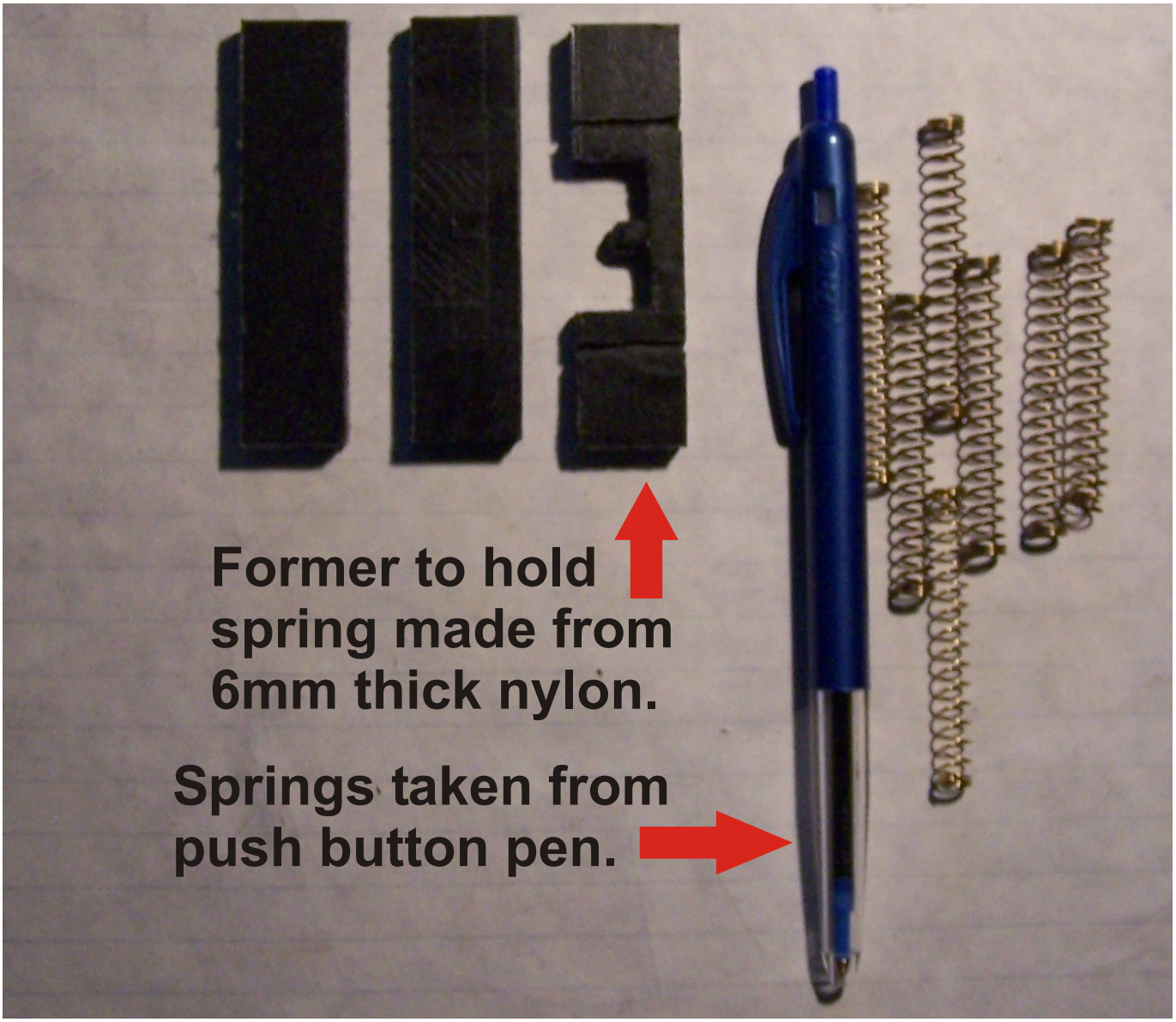
Top elevation

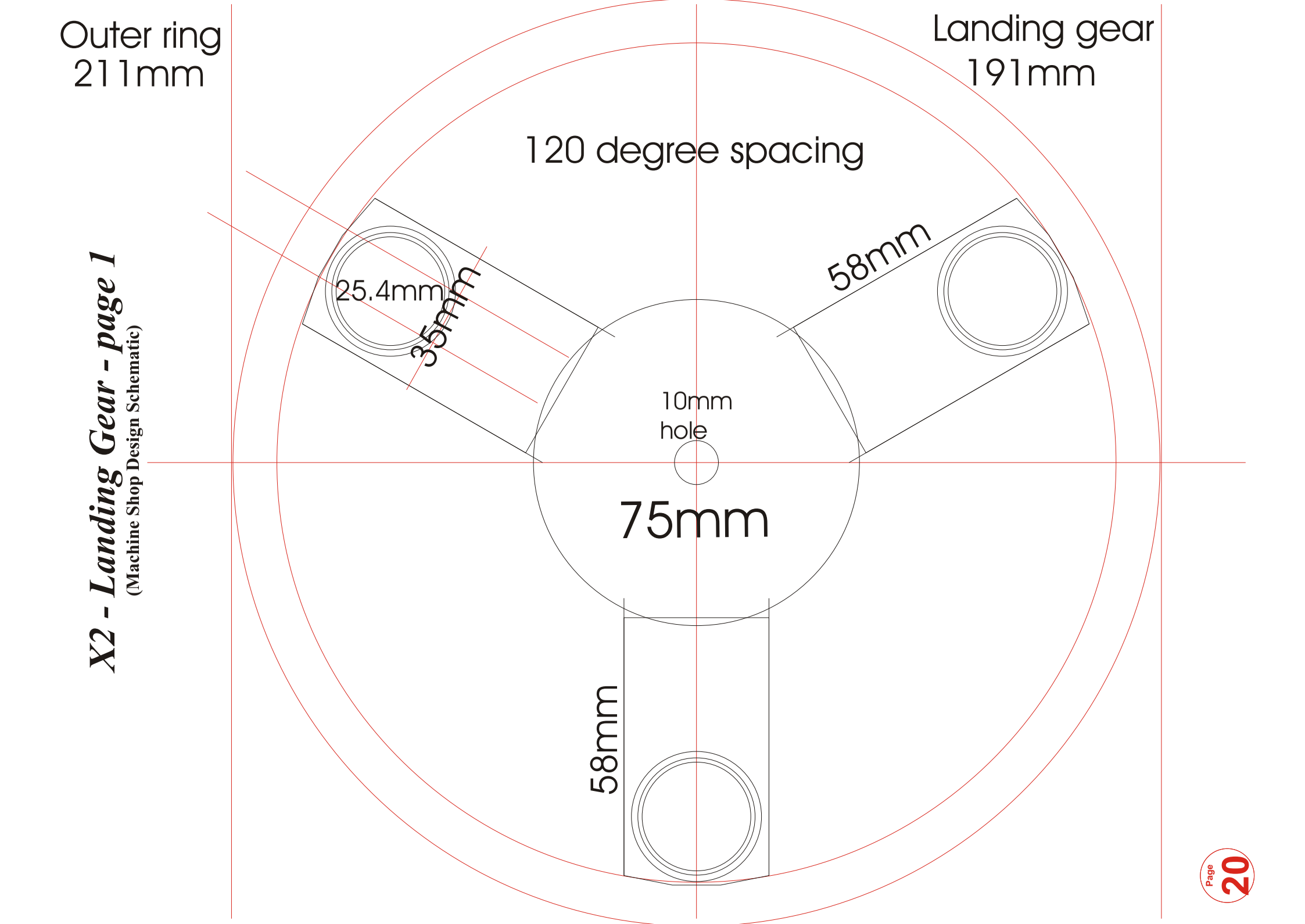


X2 - ‘C’ Magnet Electrical Contact Former x 12

(Machine Shop Design Schematic)





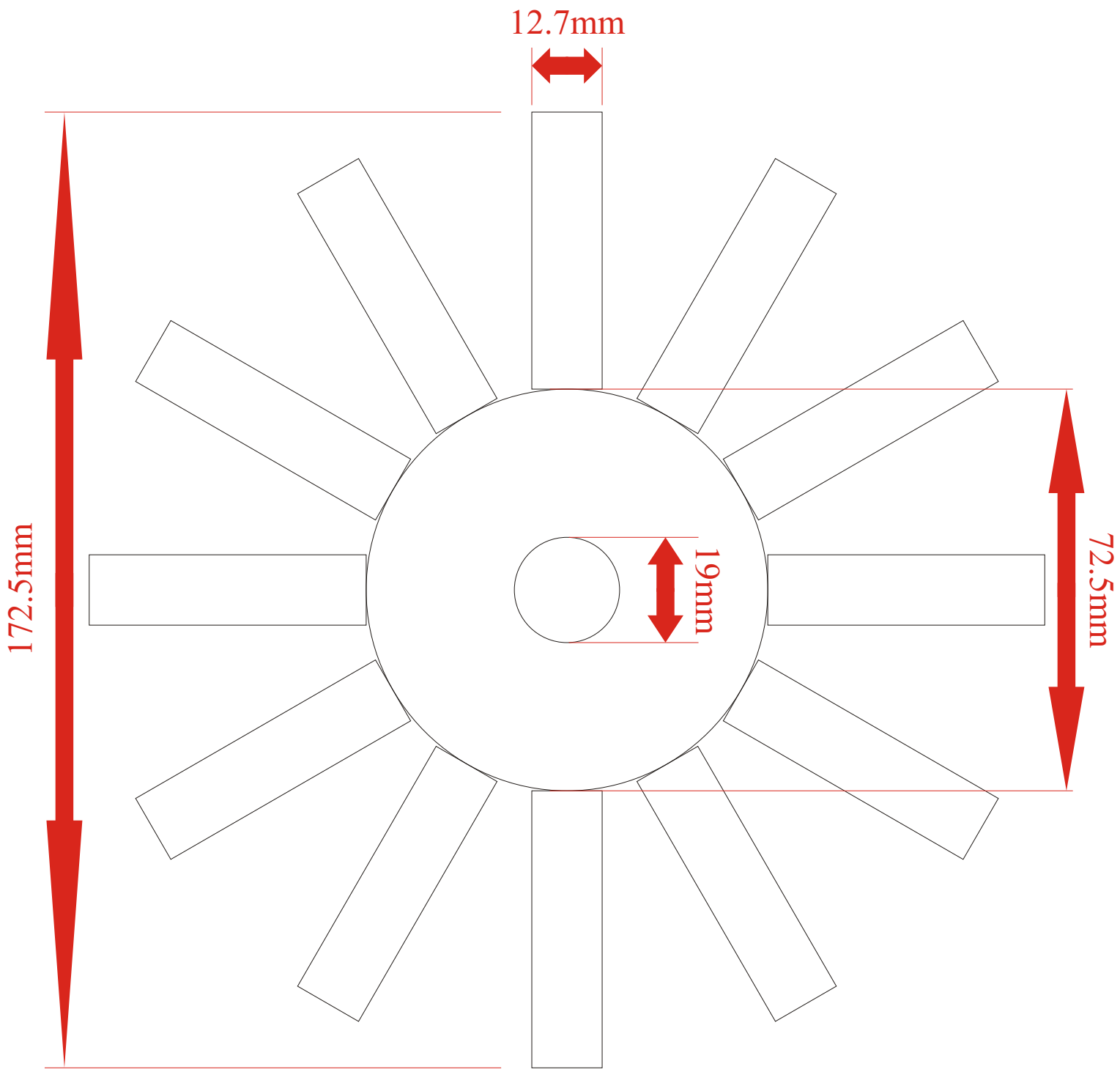


X2 - Landing Gear - page 1

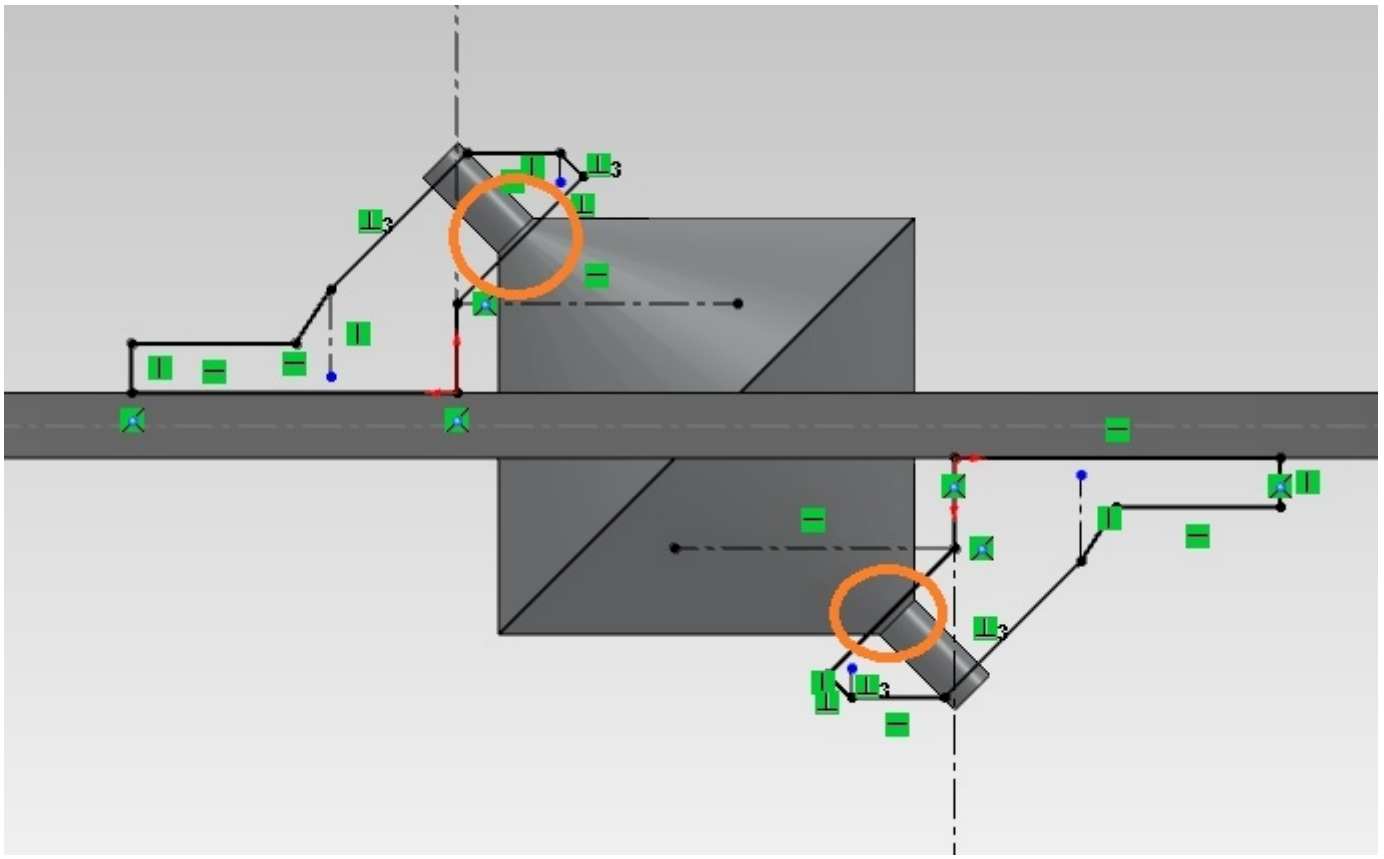
(Machine Shop Design Schematic)

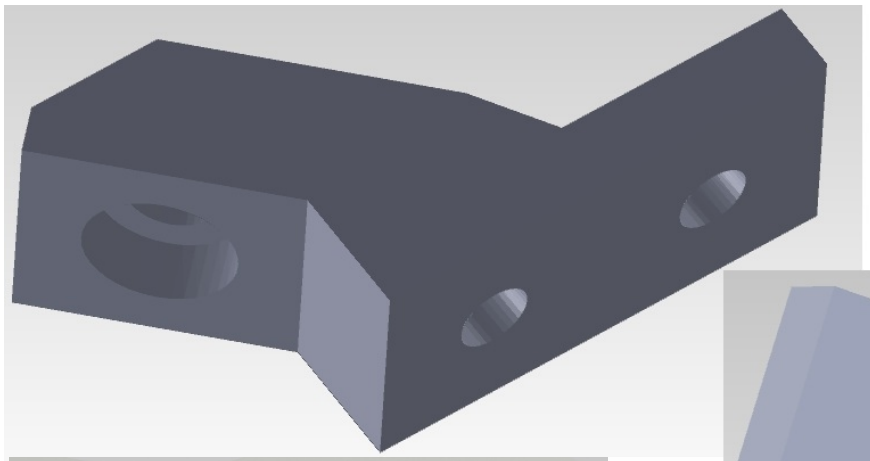
X2 - Keystone

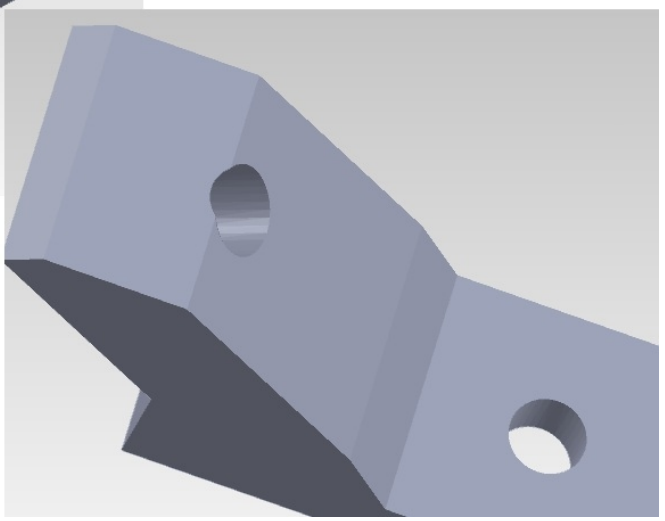
(Machine Shop Design Schematic)

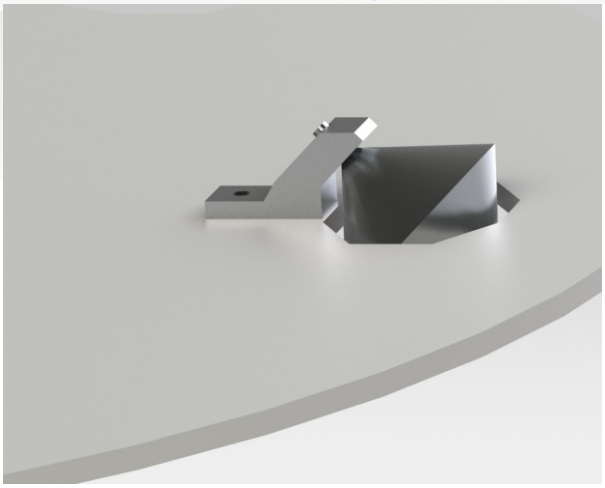


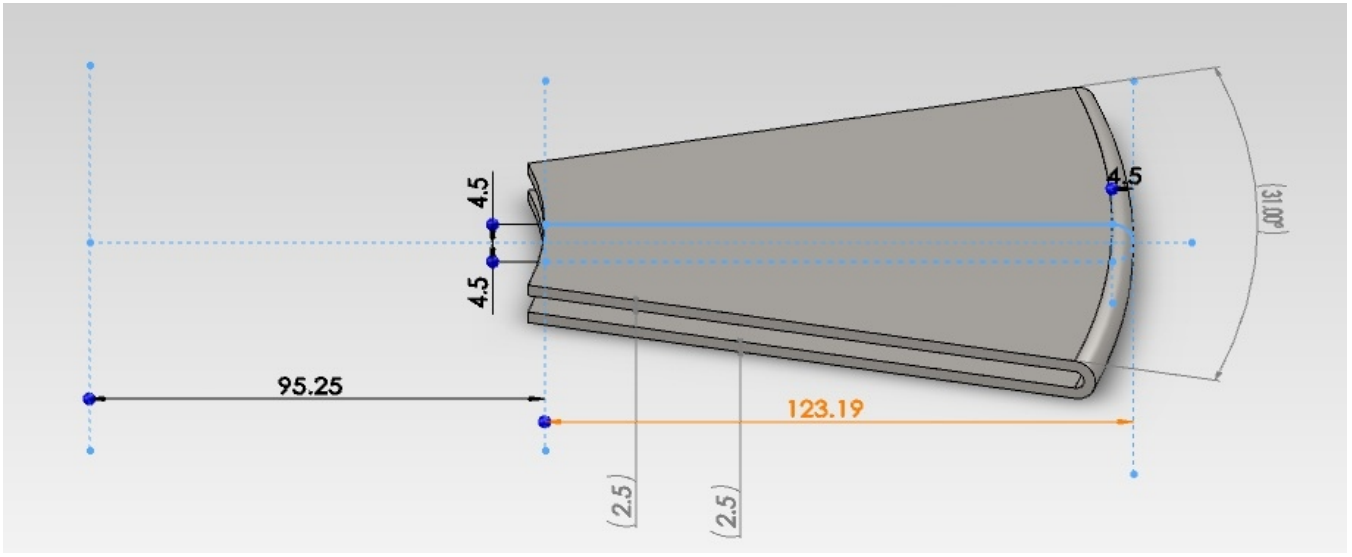
This is the piece that all of the rib sections join to. The hole through the center is for the 19mm bearing. This can be printed out and used as a template if you are making this piece from balsa or ply etc.

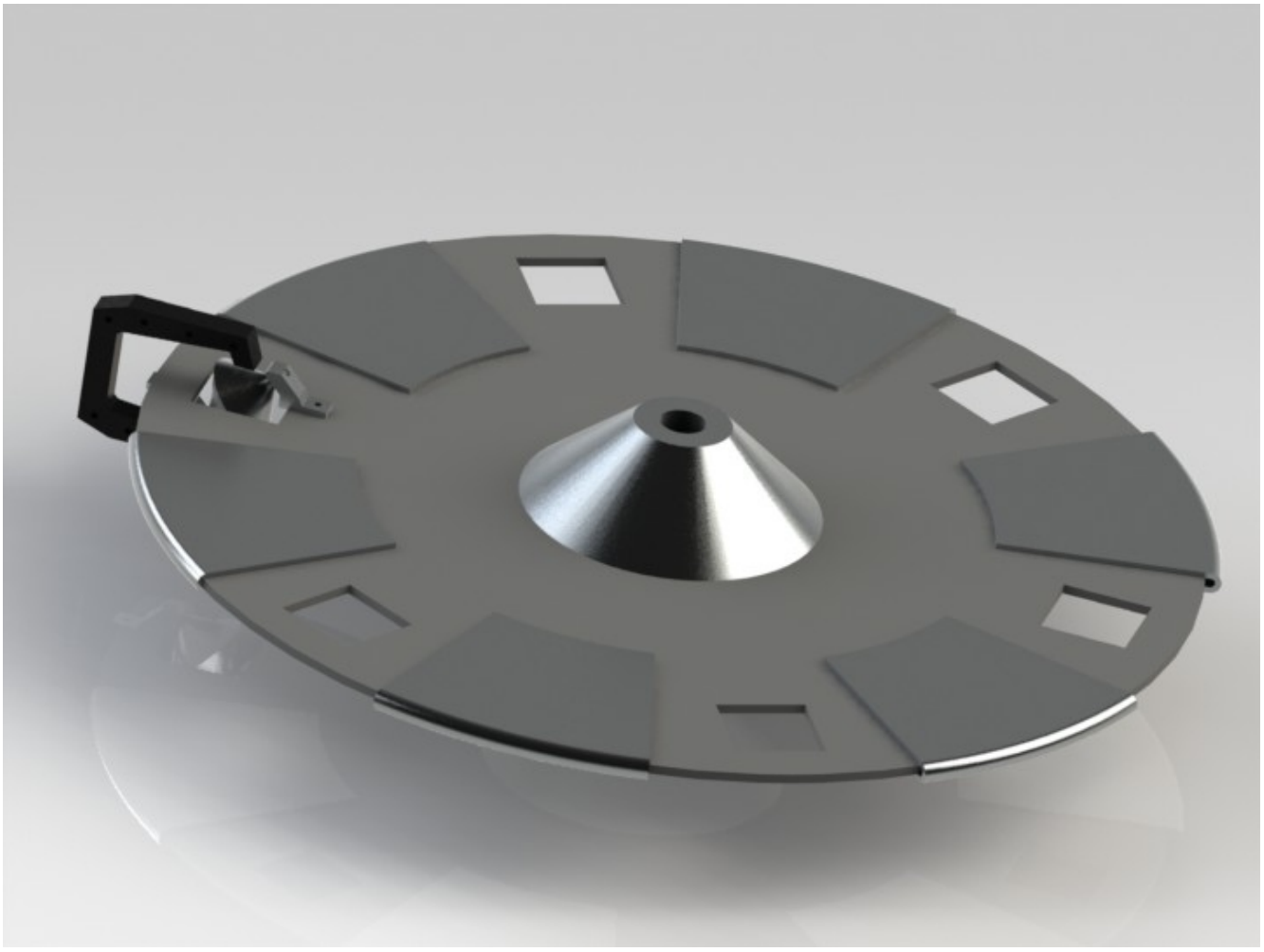


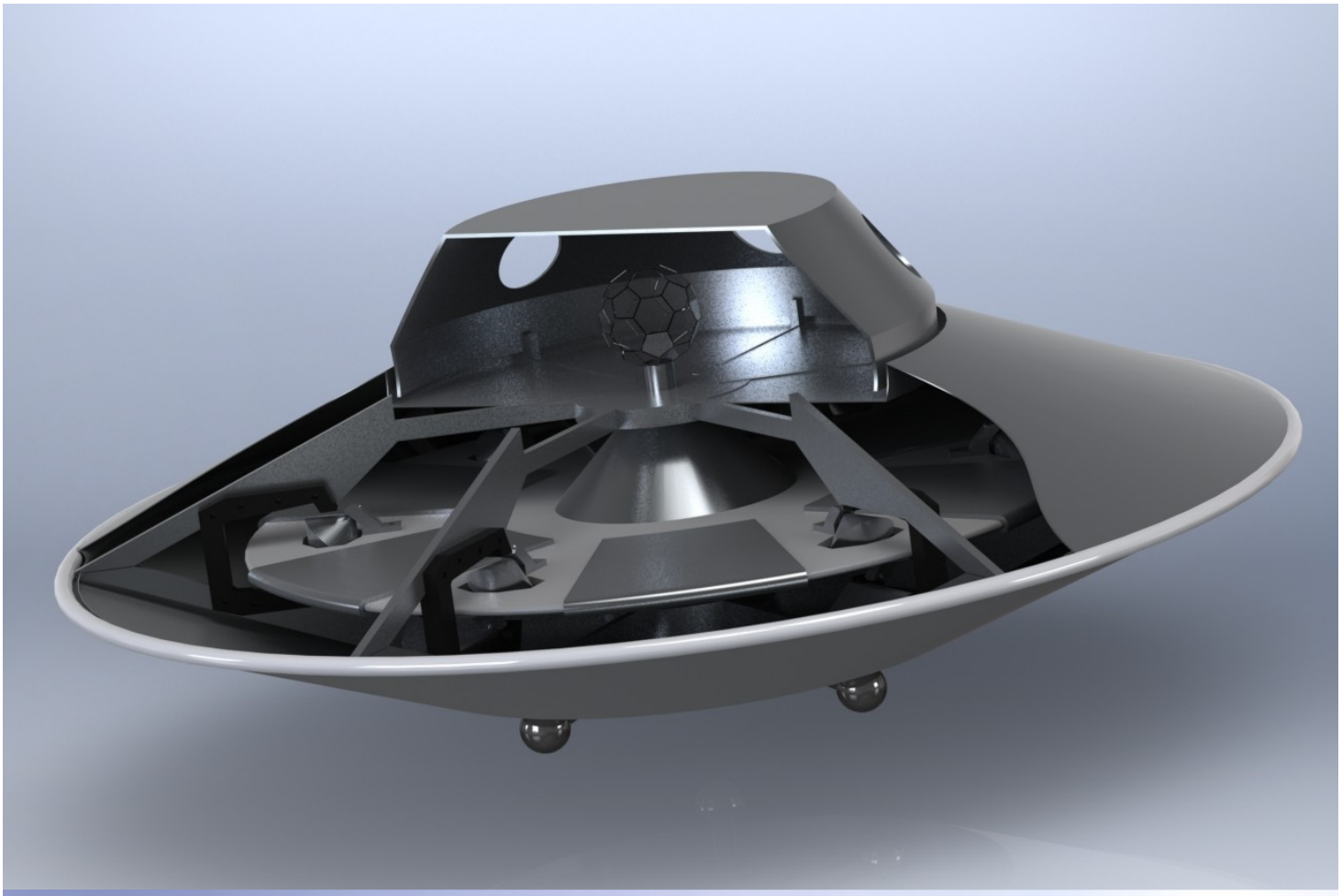


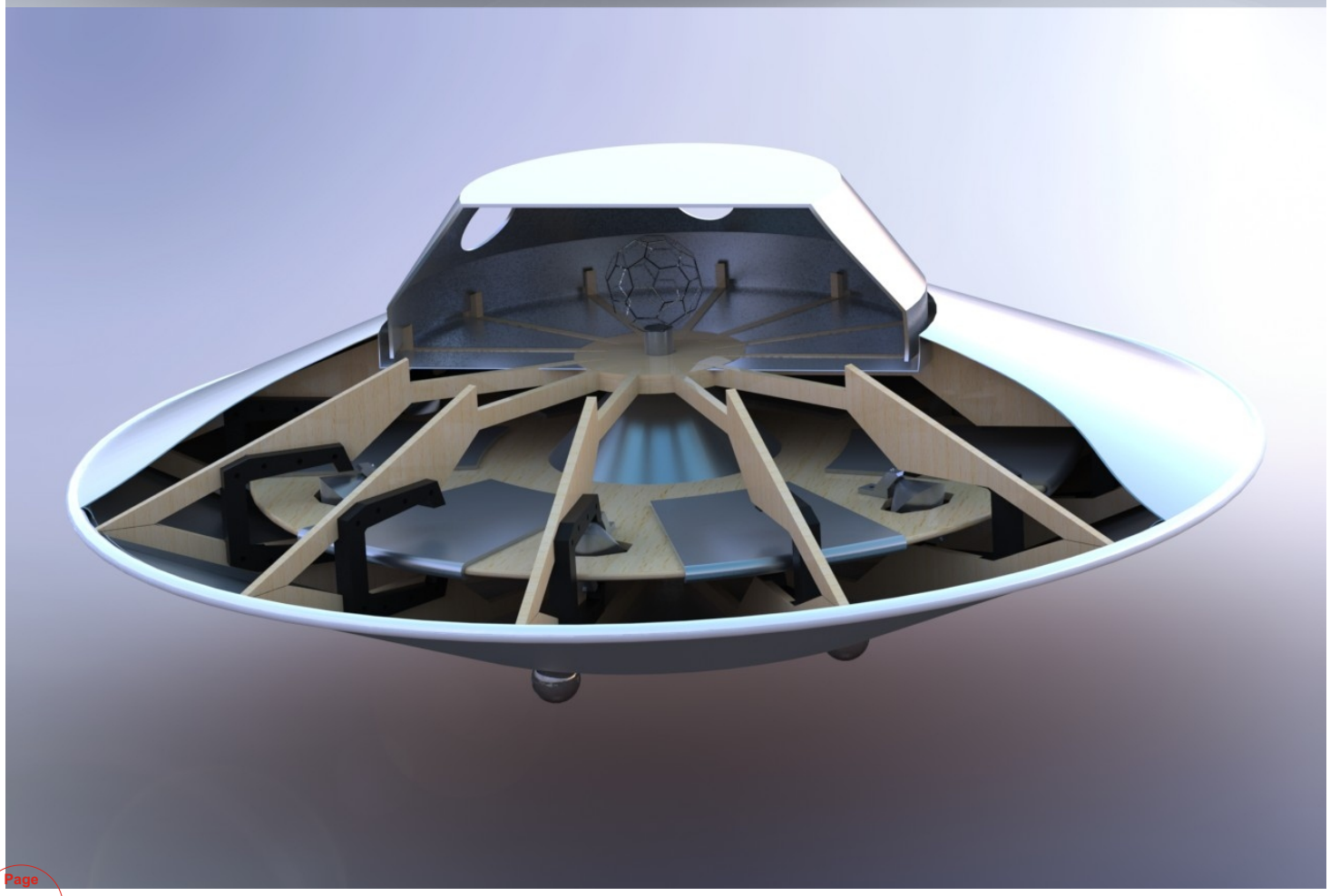


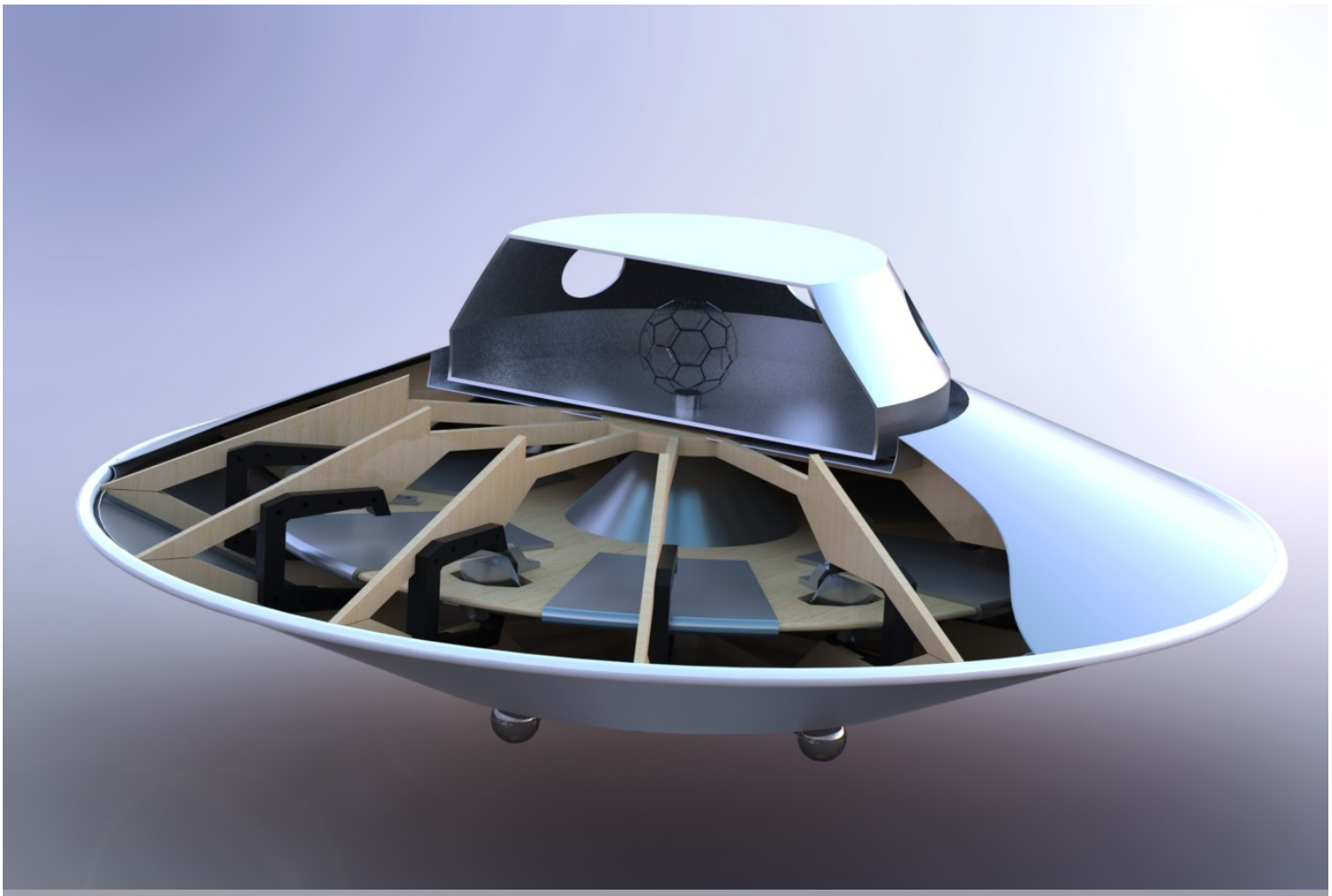



4.5
4.5
4.5
(31.00°)
95.25
123.19
(2.5)
(2.5)

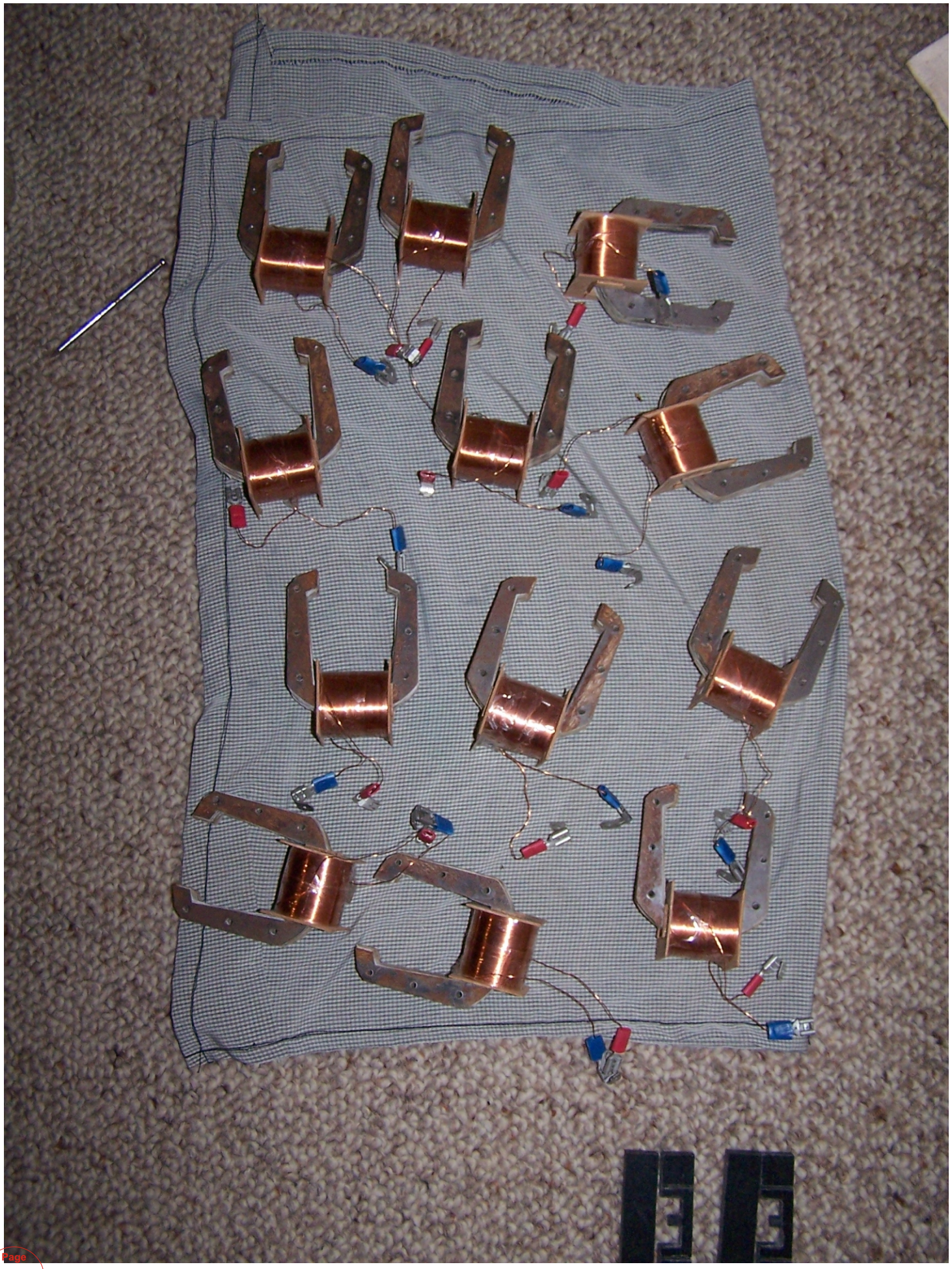




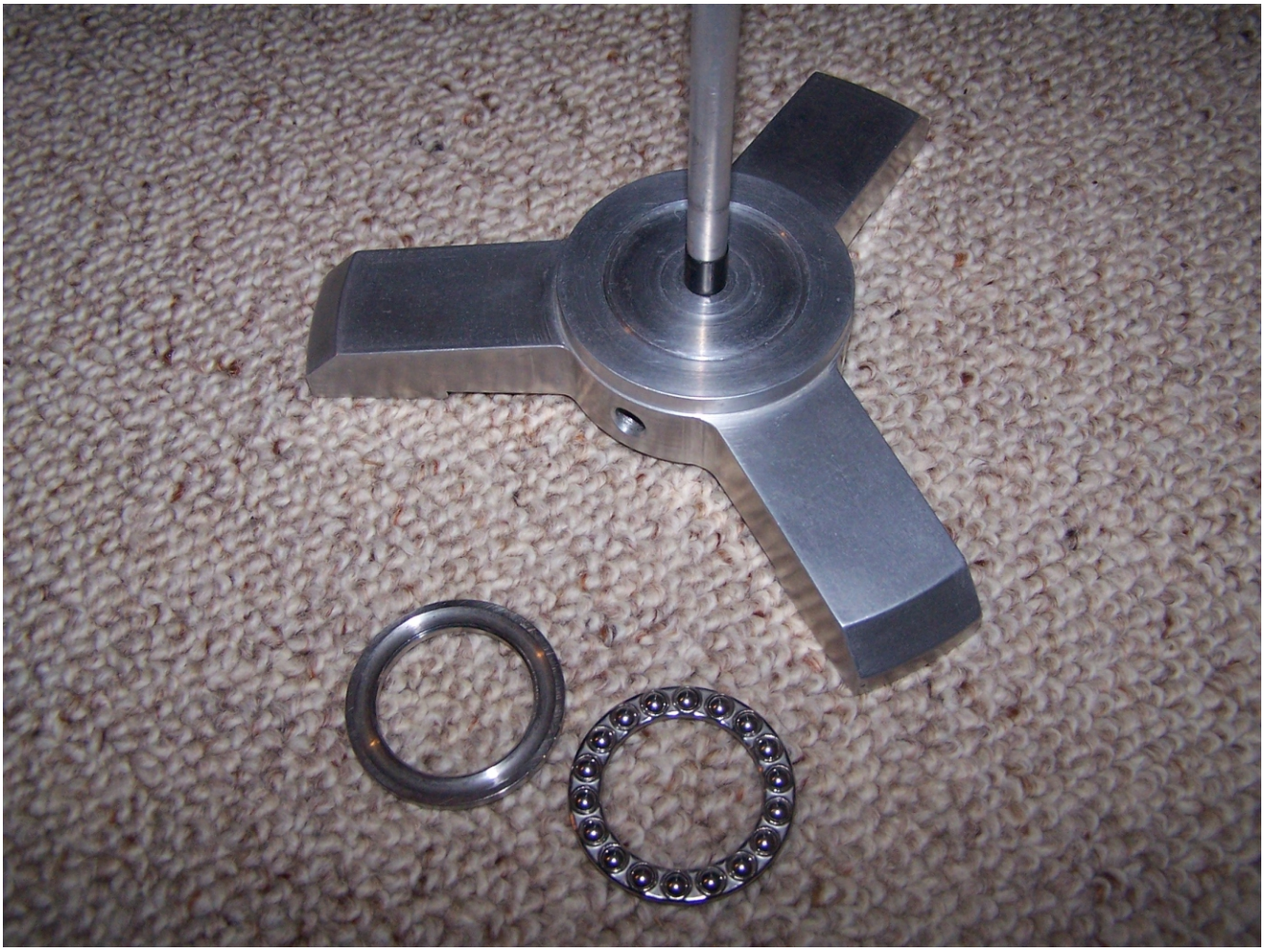




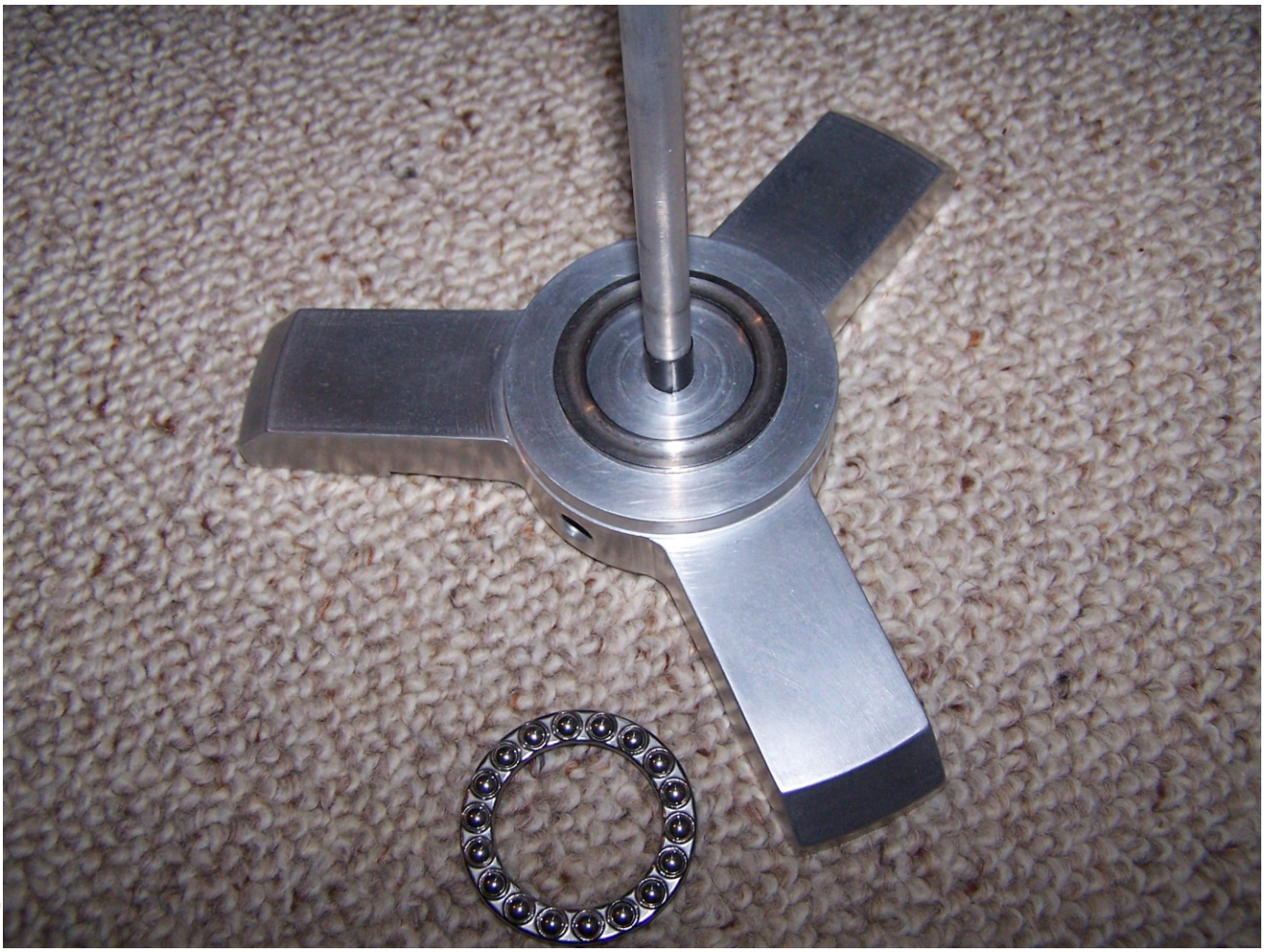

OTC-X1



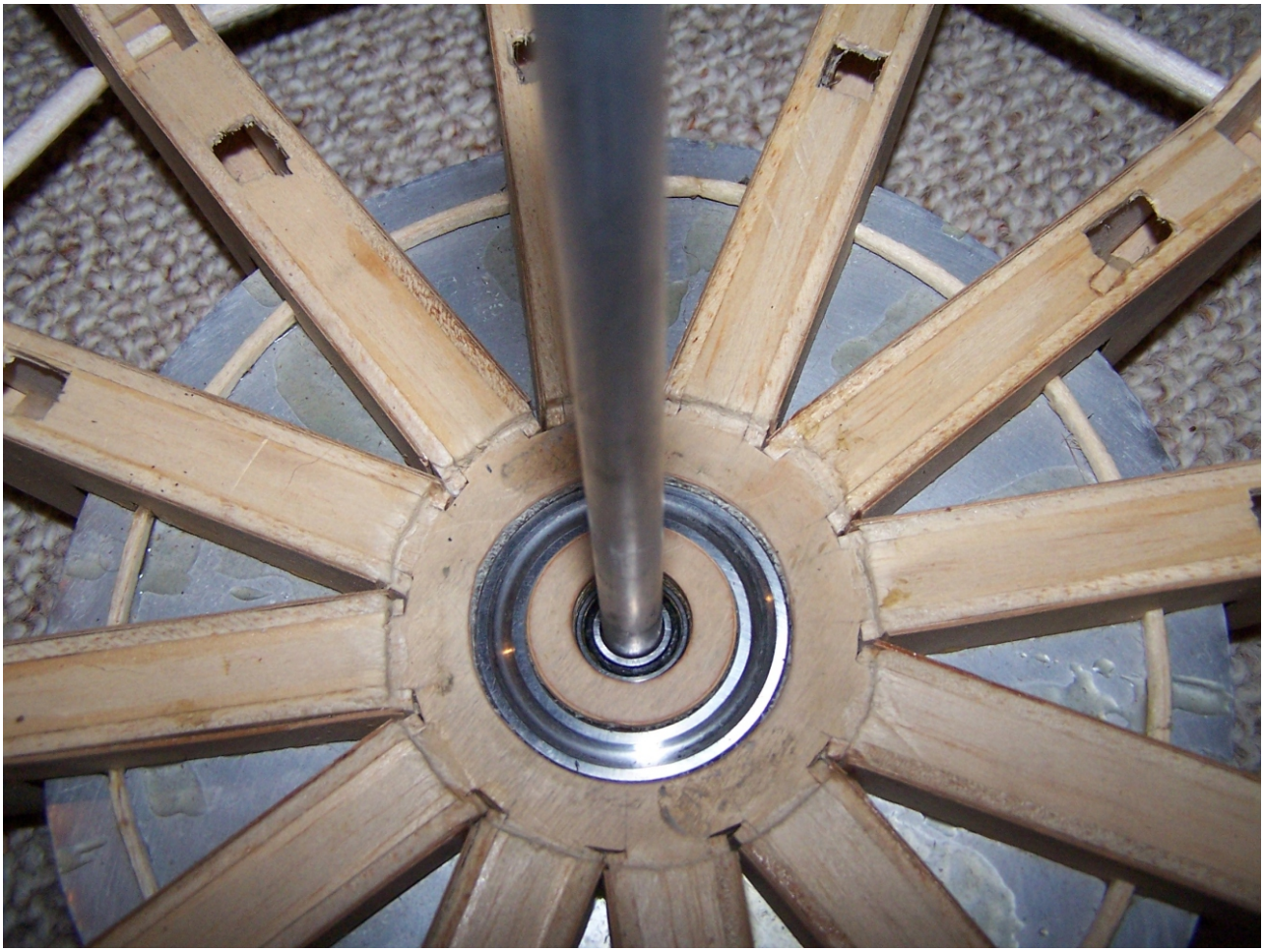
Landing gear with central shaft.



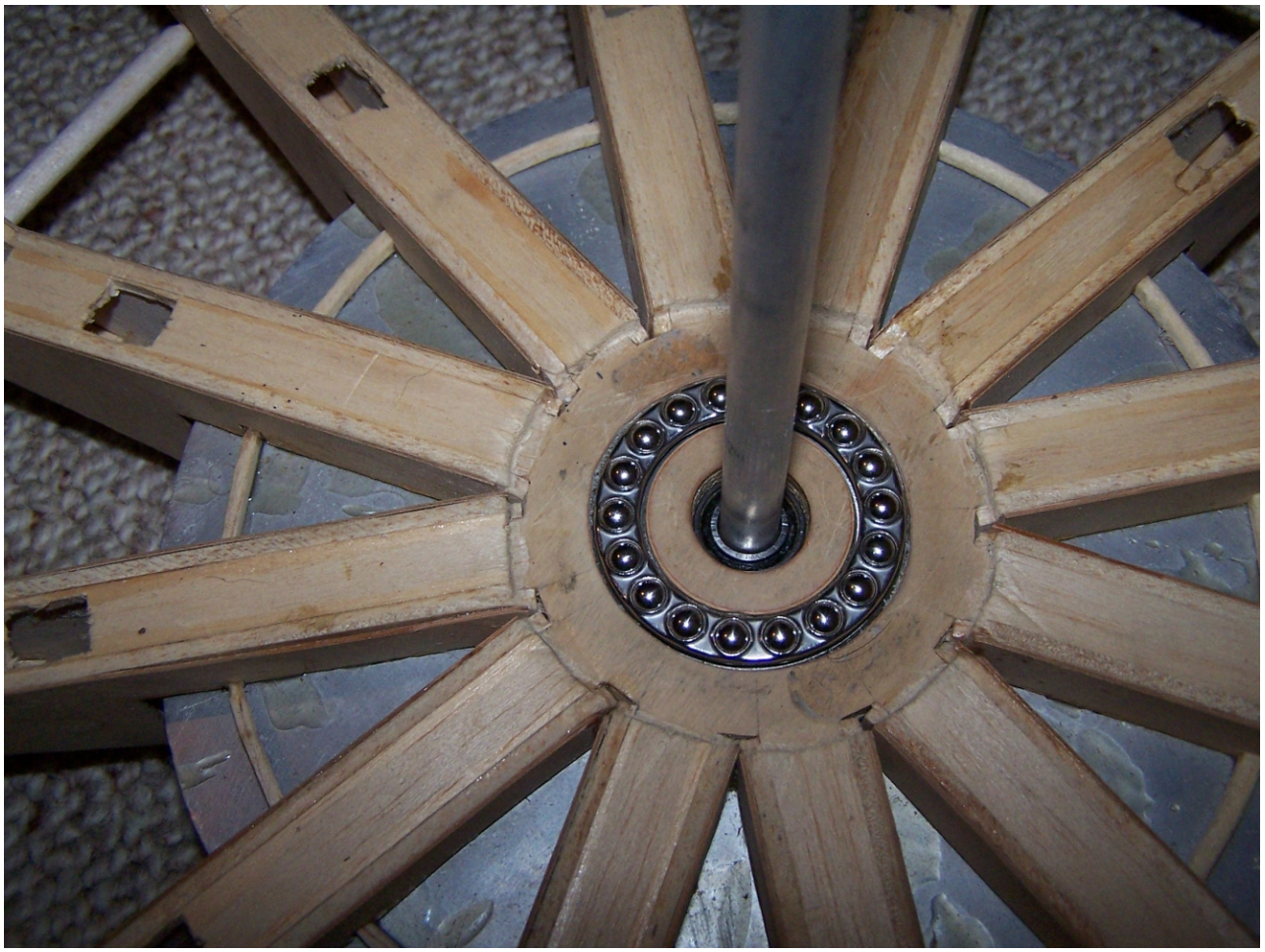
Landing gear bearing assembly.

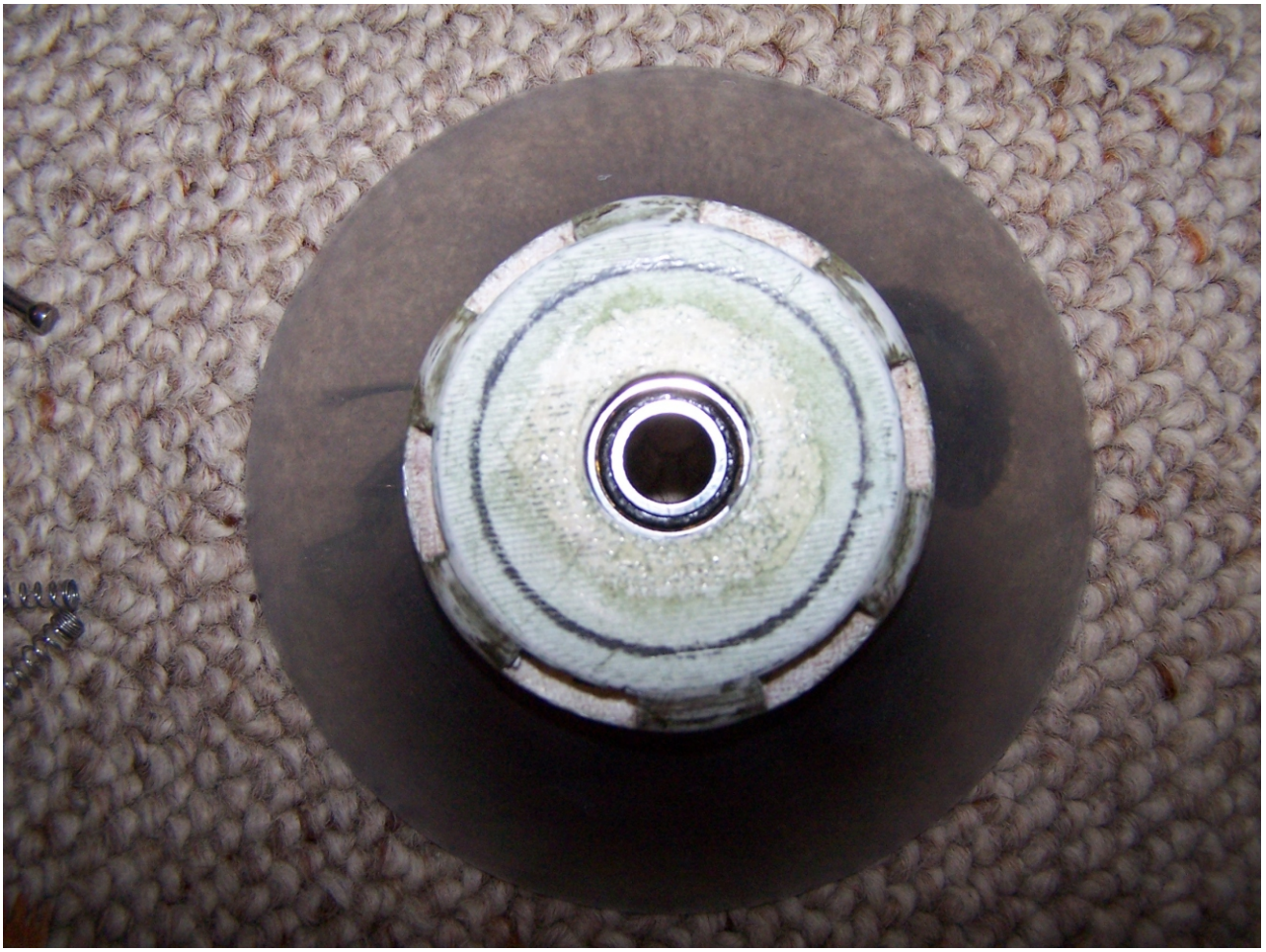


Underside of the outer hull frame with thrust bearing plate and central shaft bearing.

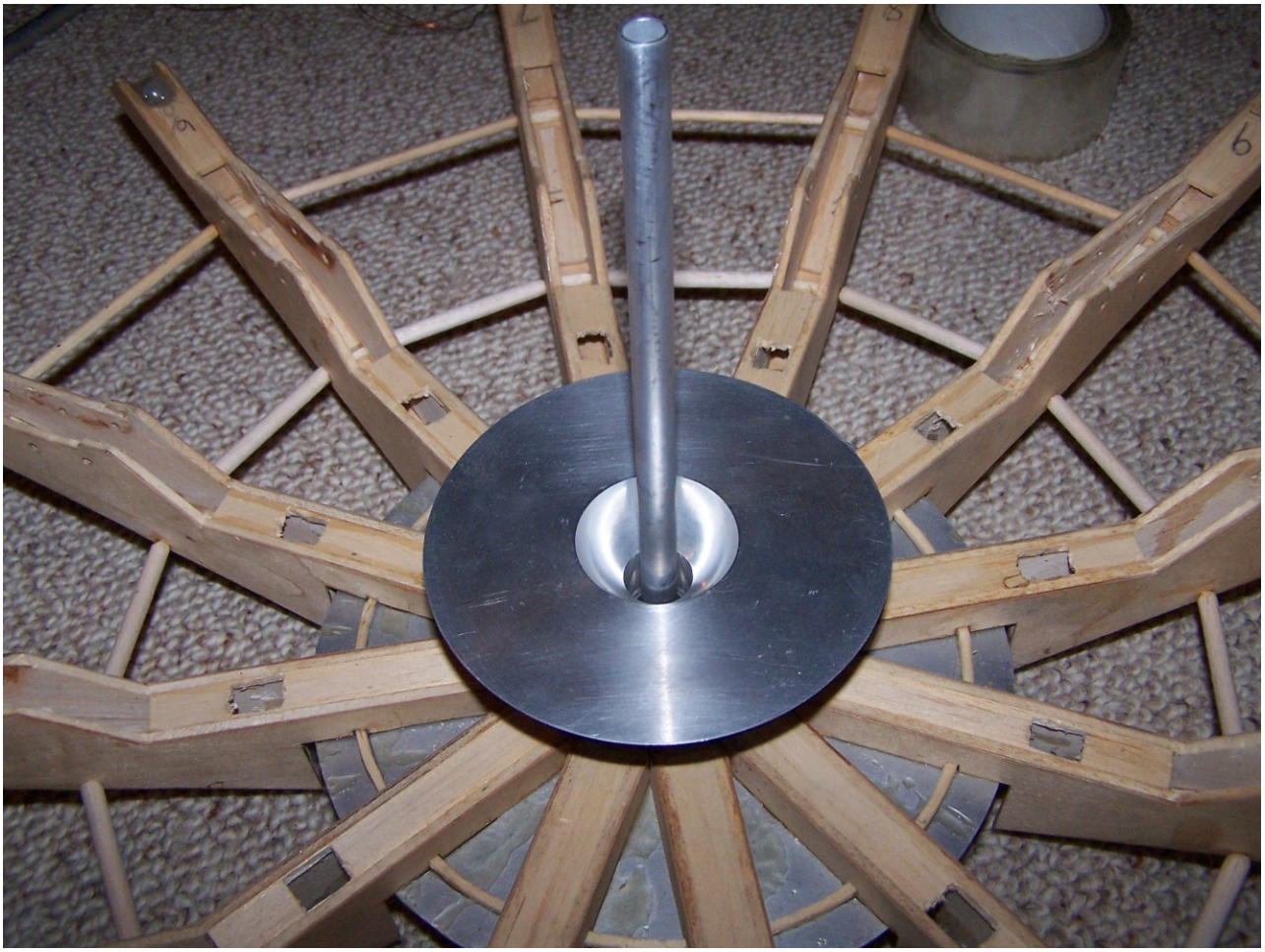


Bottom half of the outer hull frame mounted on the landing gear and the central accumulator thrust bearing assembly.

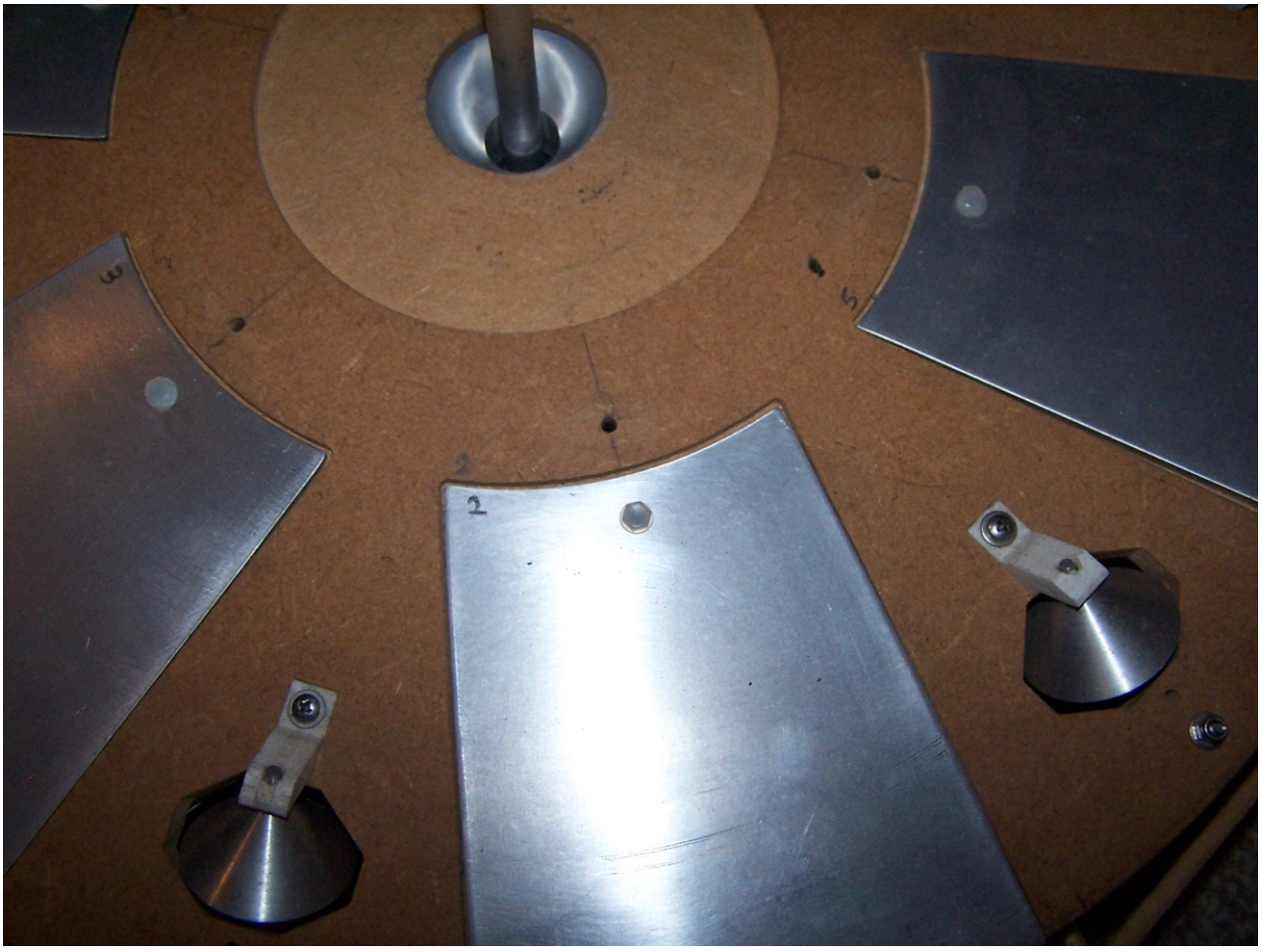


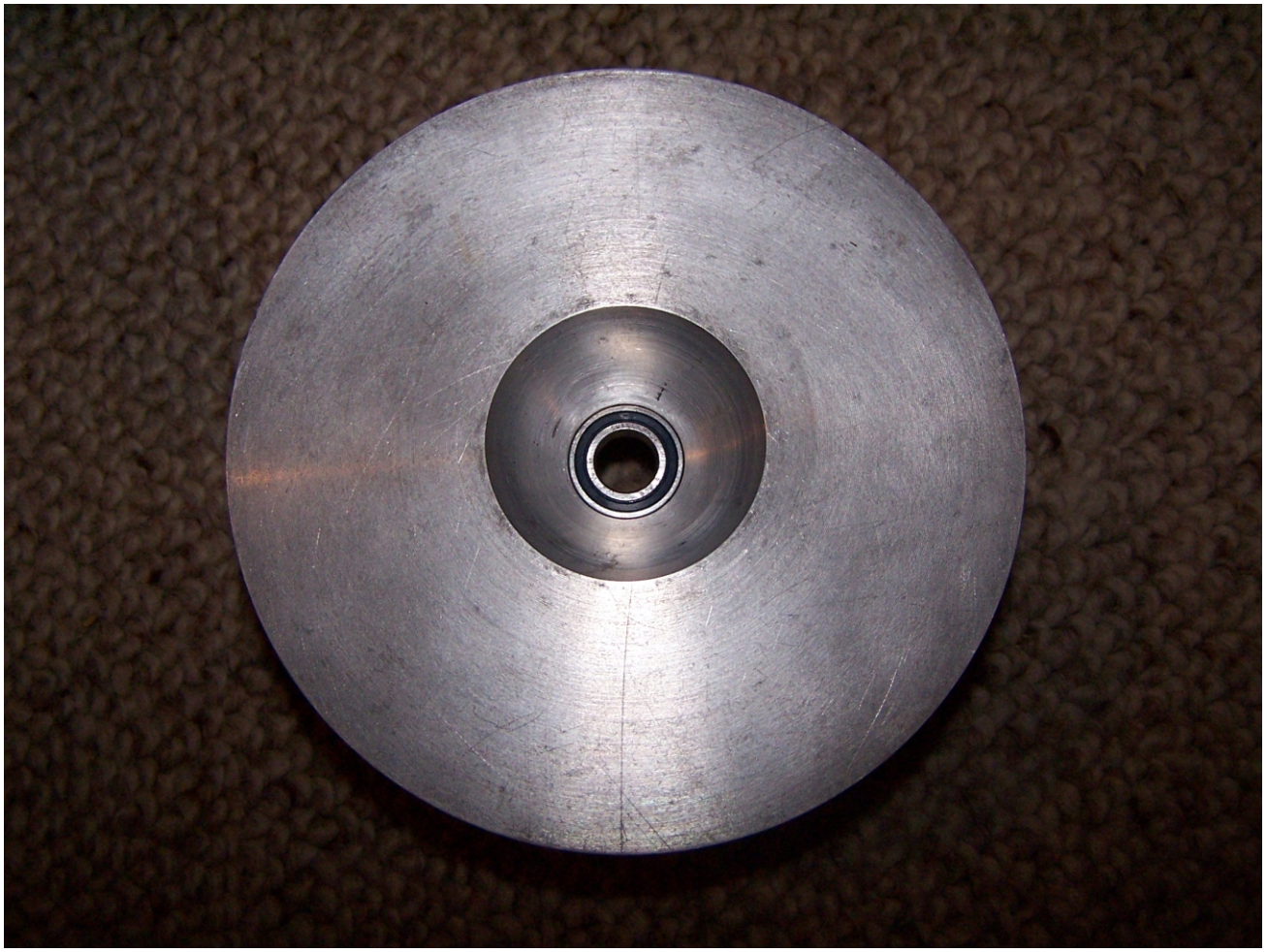


Central accumulator shaft bearing and the bottom half of the central accumulator mounted on the thrust bearing assembly.

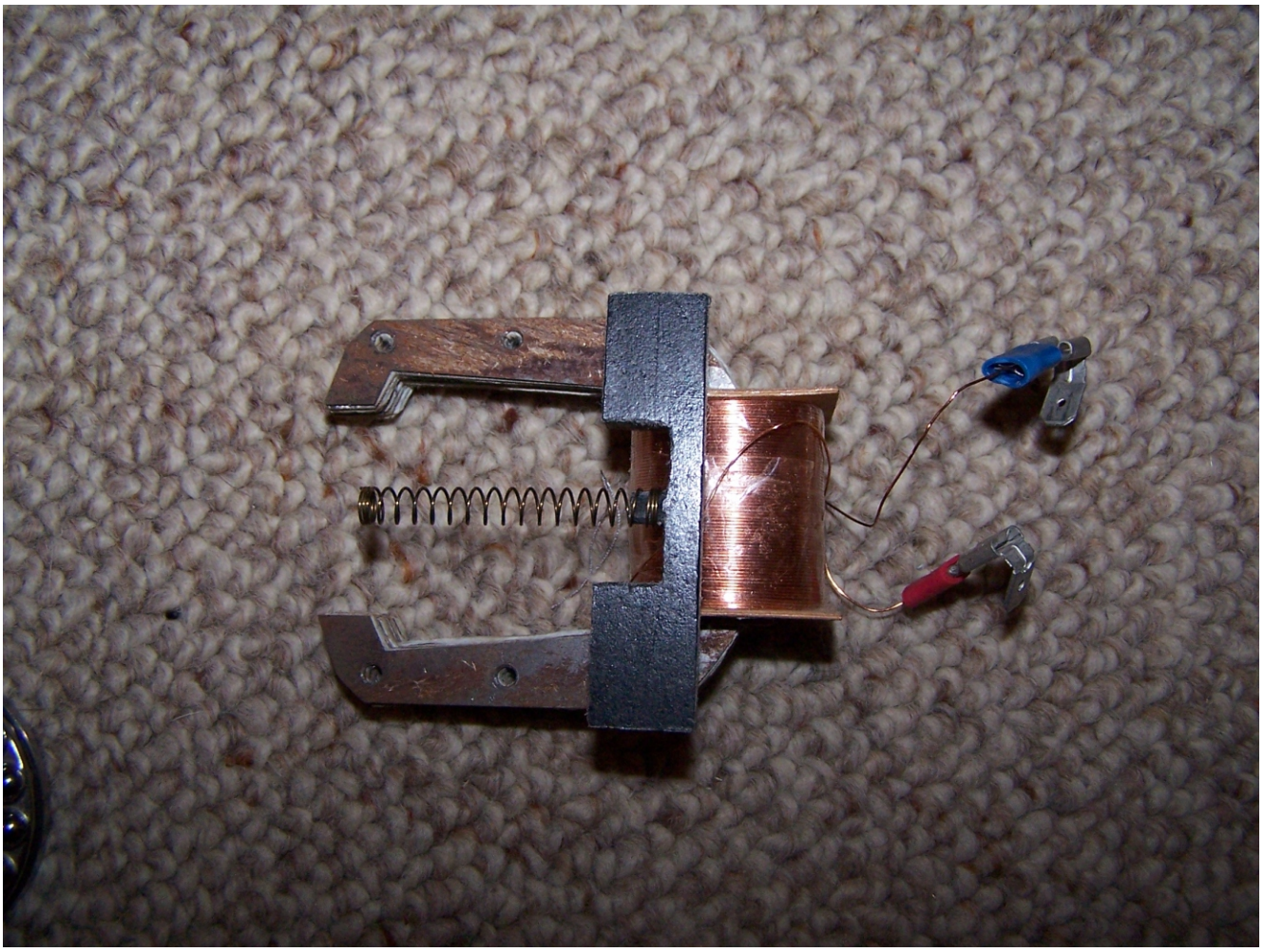


Central disk assembly mounted on the bottom half of the central accumulator and close up showing the nylon bolts used to hold the capacitor plates on to the central disk assembly.





Top half of the central accumulator with shaft bearing and the top half of the central accumulator mounted on the central disk assembly.



‘C’ magnet with nylon spring former and spring attached. Spring needs to be cut to size.