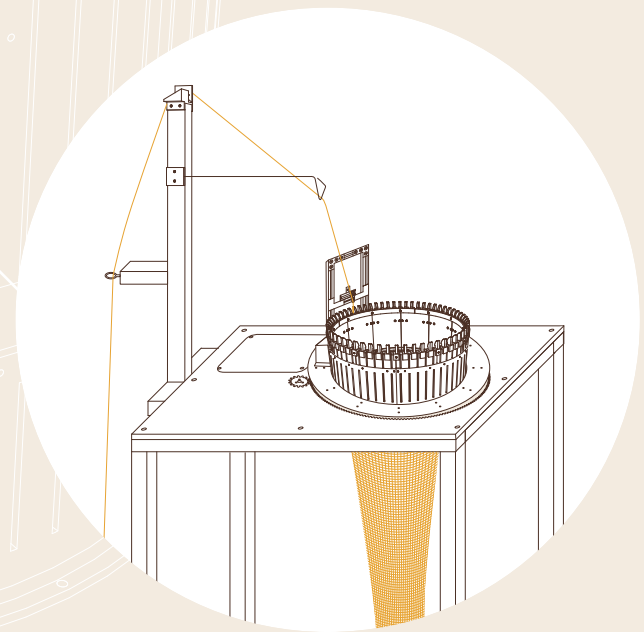


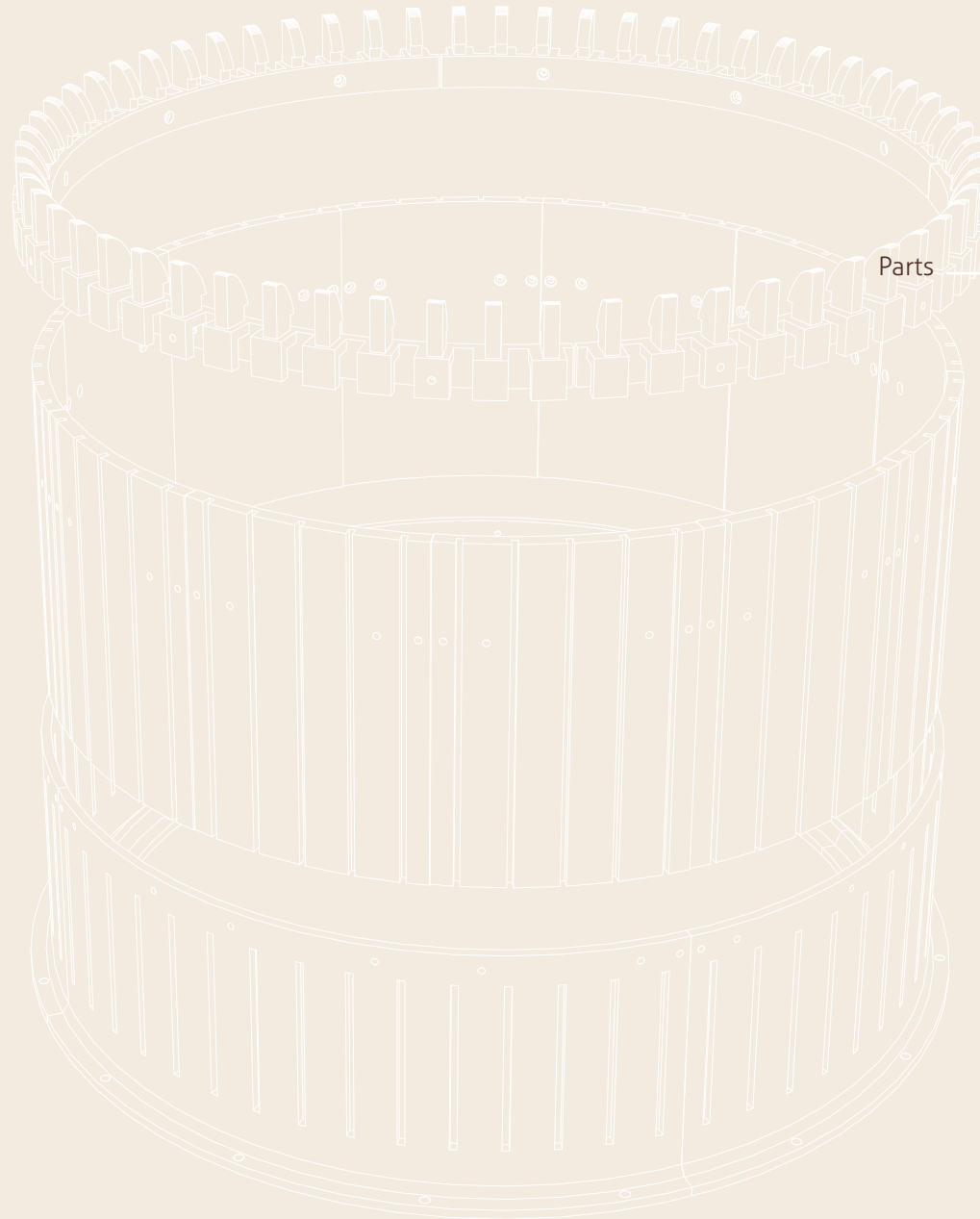
Circular Knitic

open source knitting machine

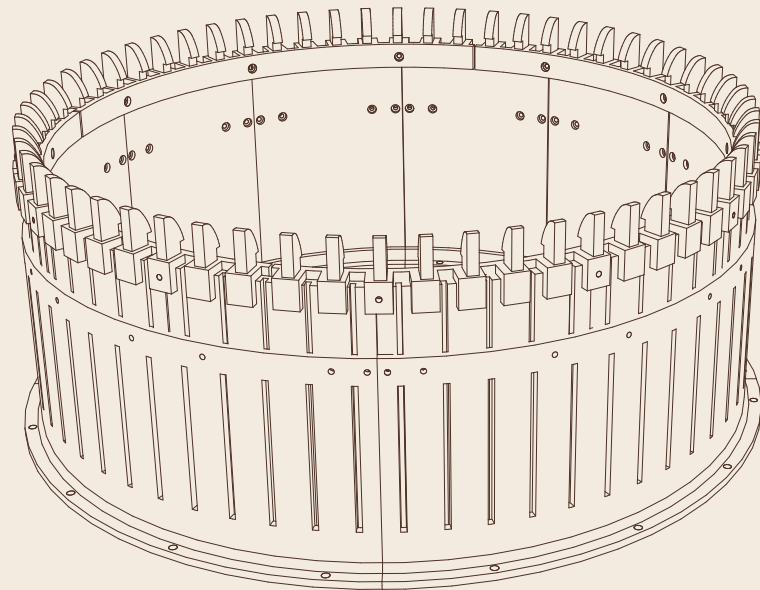
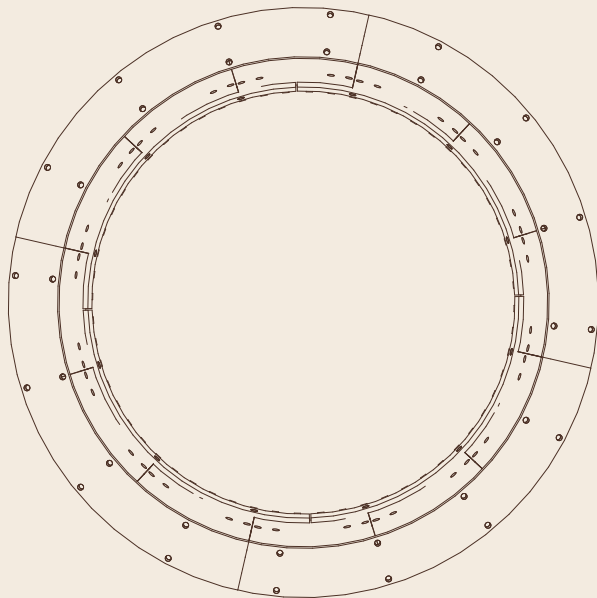
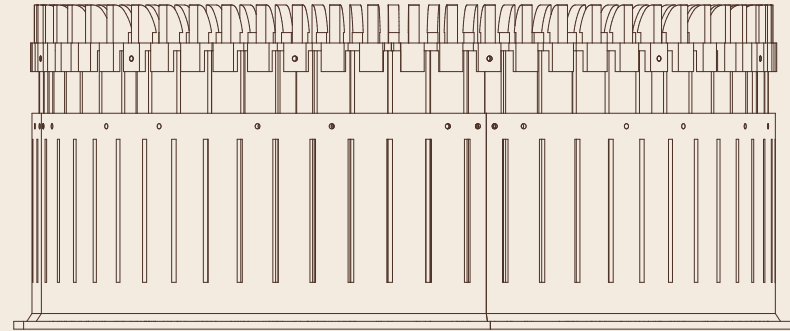
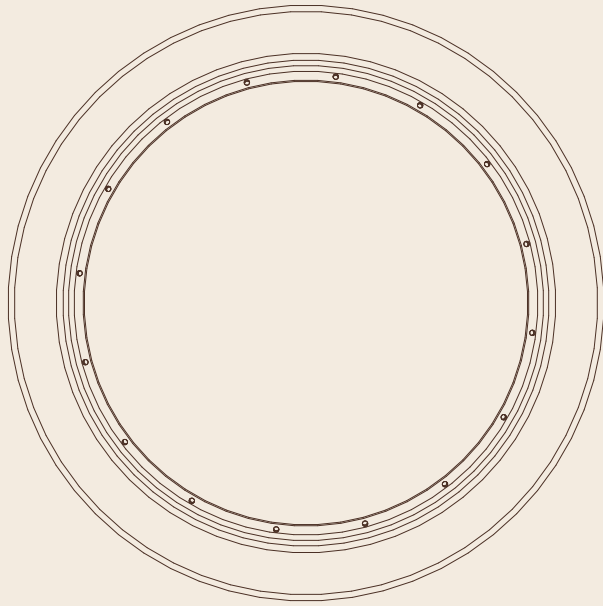
<http://var-mar.info> | <http://www.knitic.com>

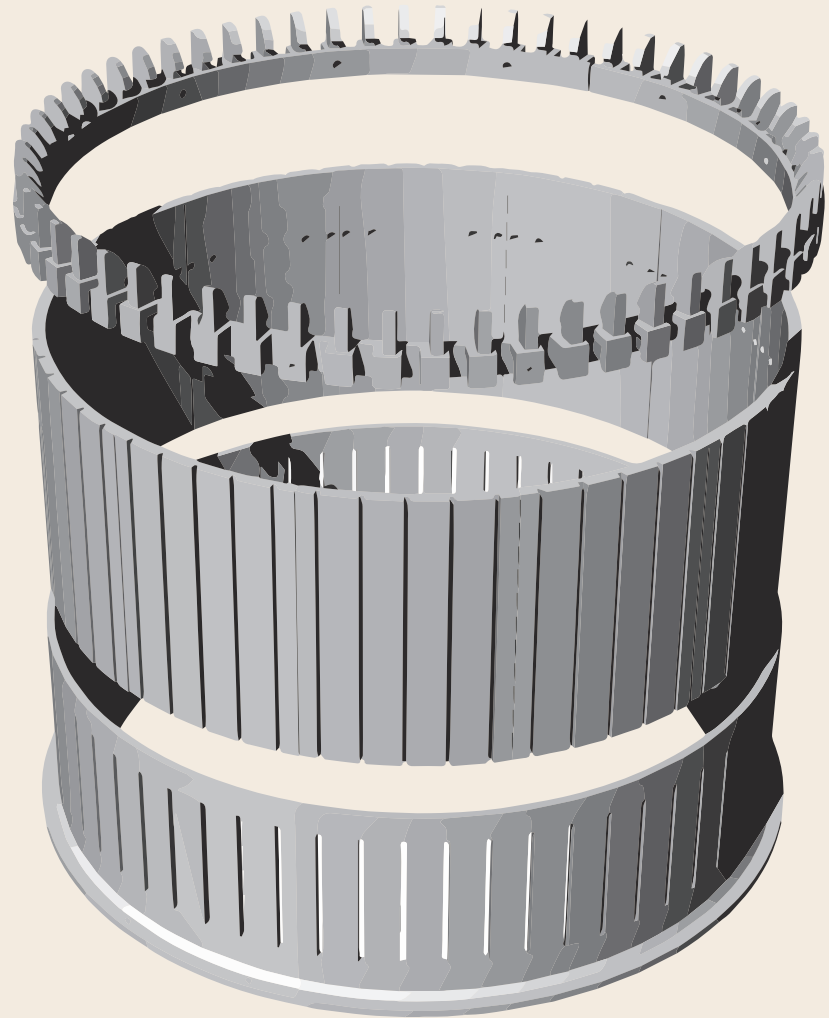
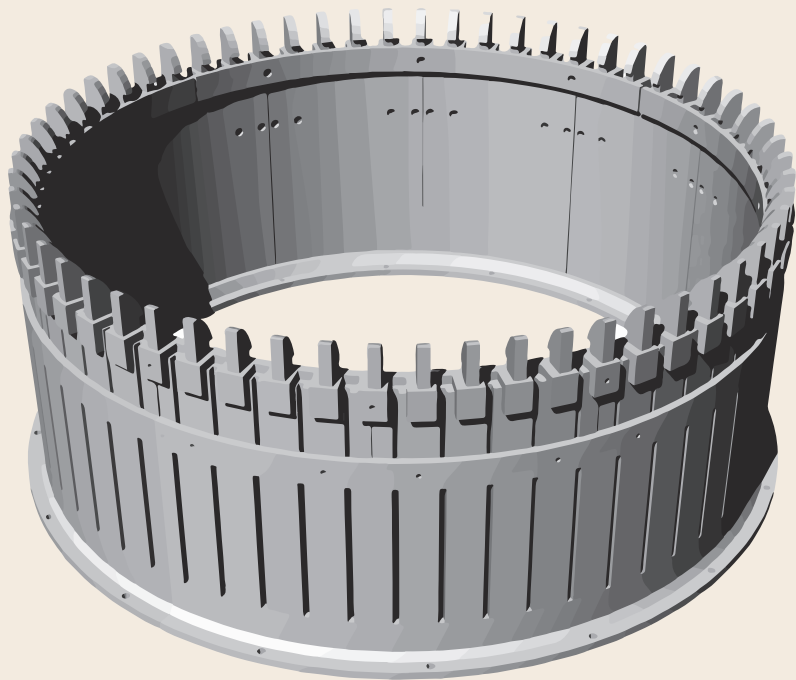
Varvara Guljajeva & Mar Canet
2014

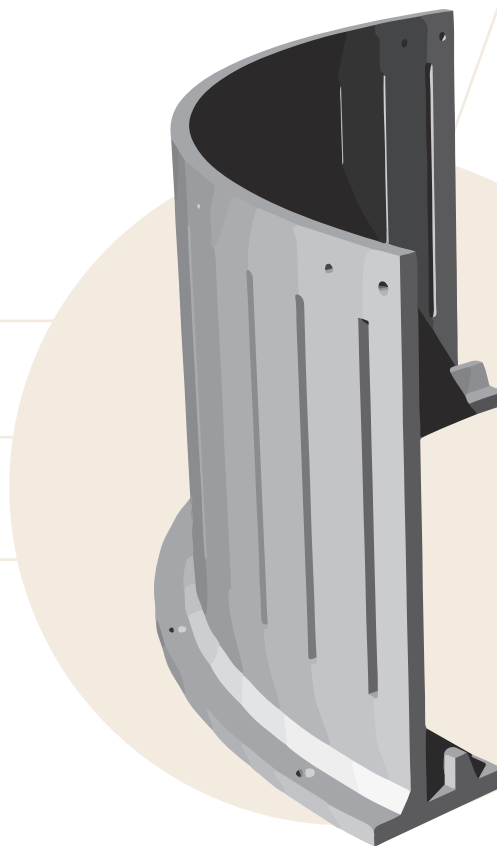
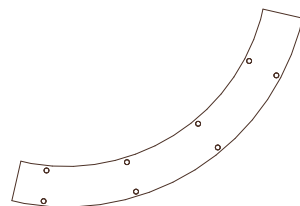
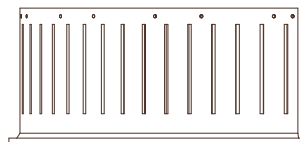
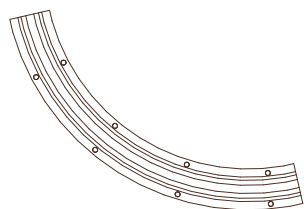
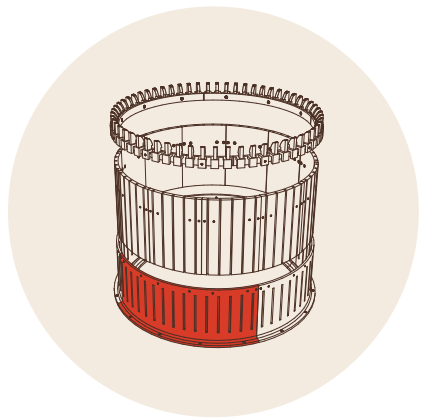




Parts

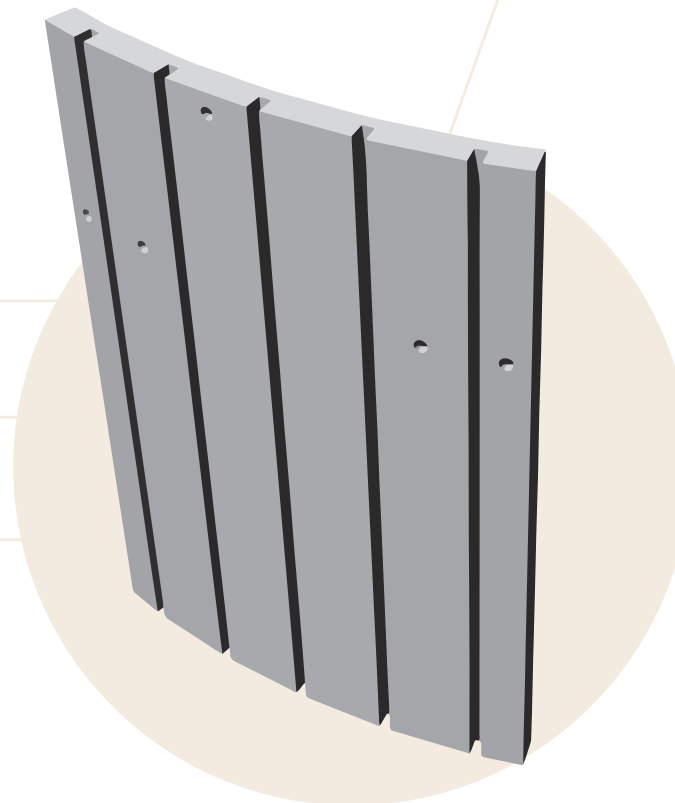
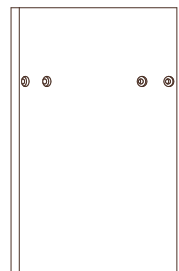
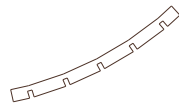
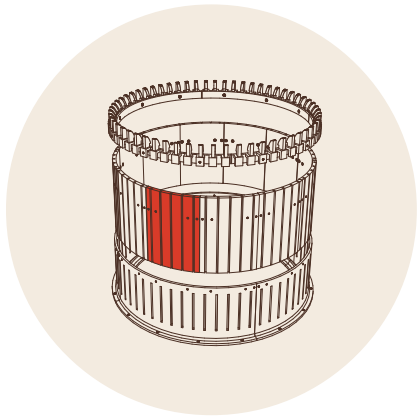






4 x Outer

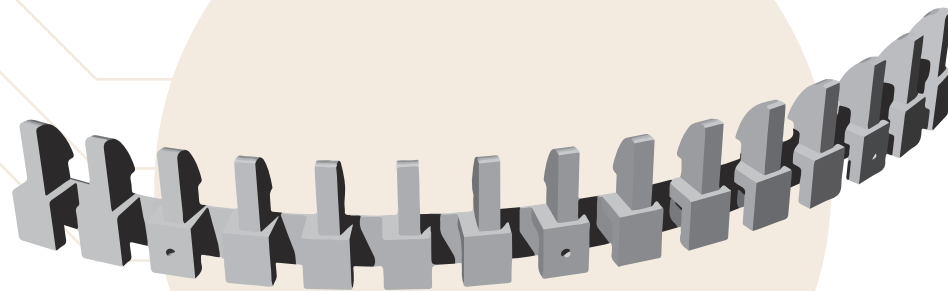
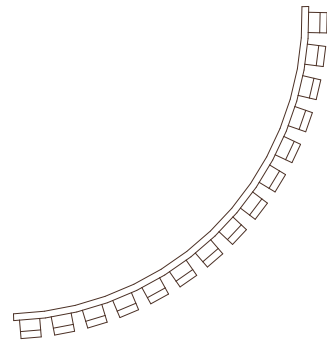
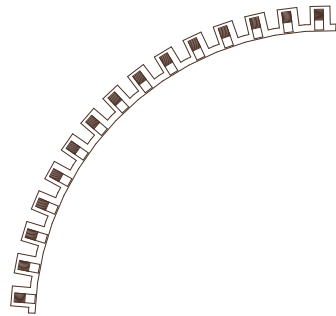
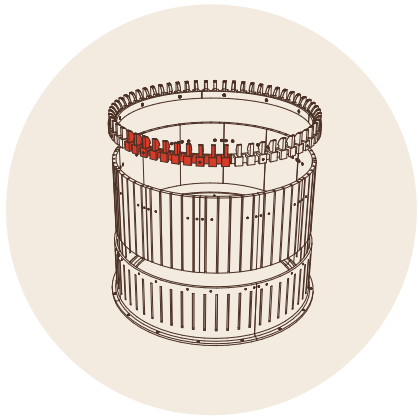
Connect to a plate with:
M3,DIN912 hex screw, 12mm, 24; M3 nuts, 24



12 x Inner

where the needles go

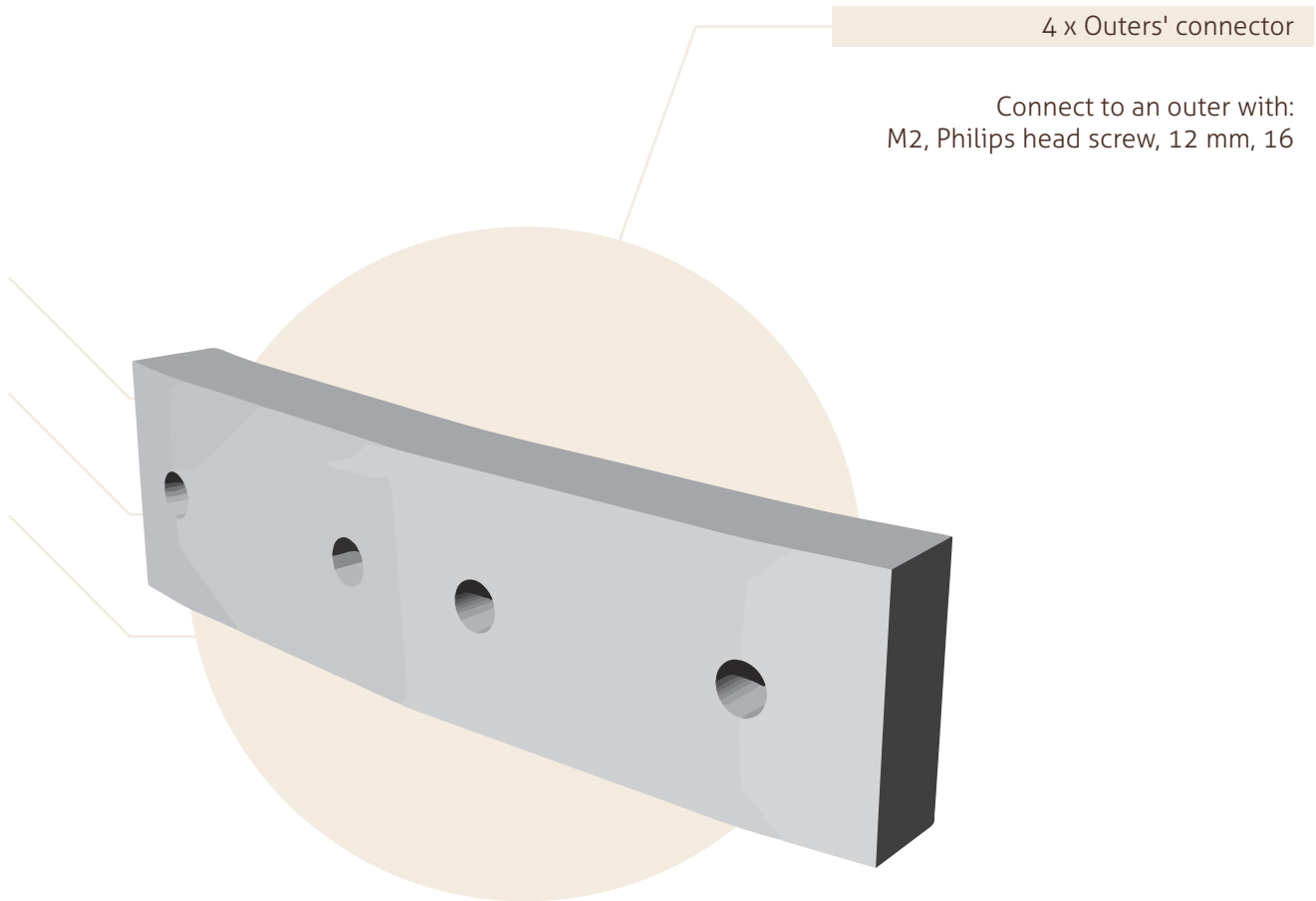
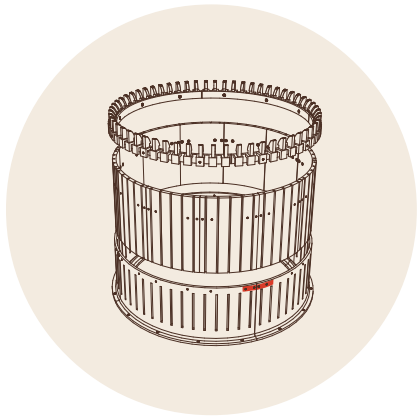
Connect to an outer with:
M2, Philips head screw, 8mm, 16

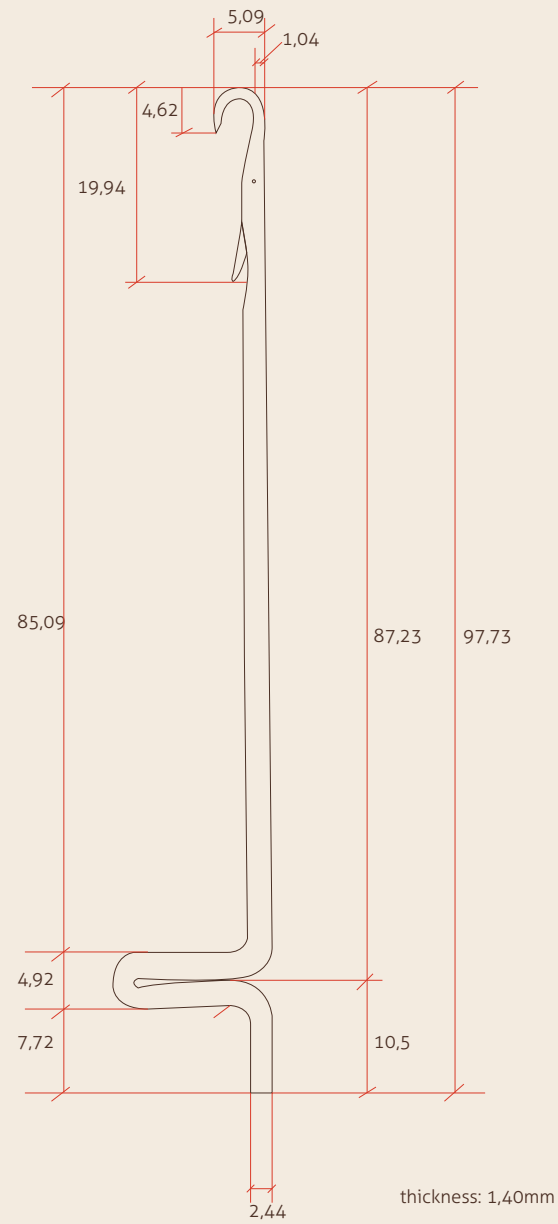
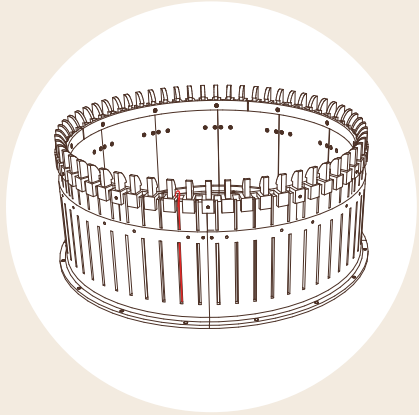


4 x Yarn holder

where the needles go

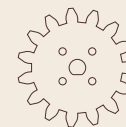
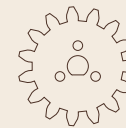
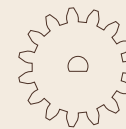
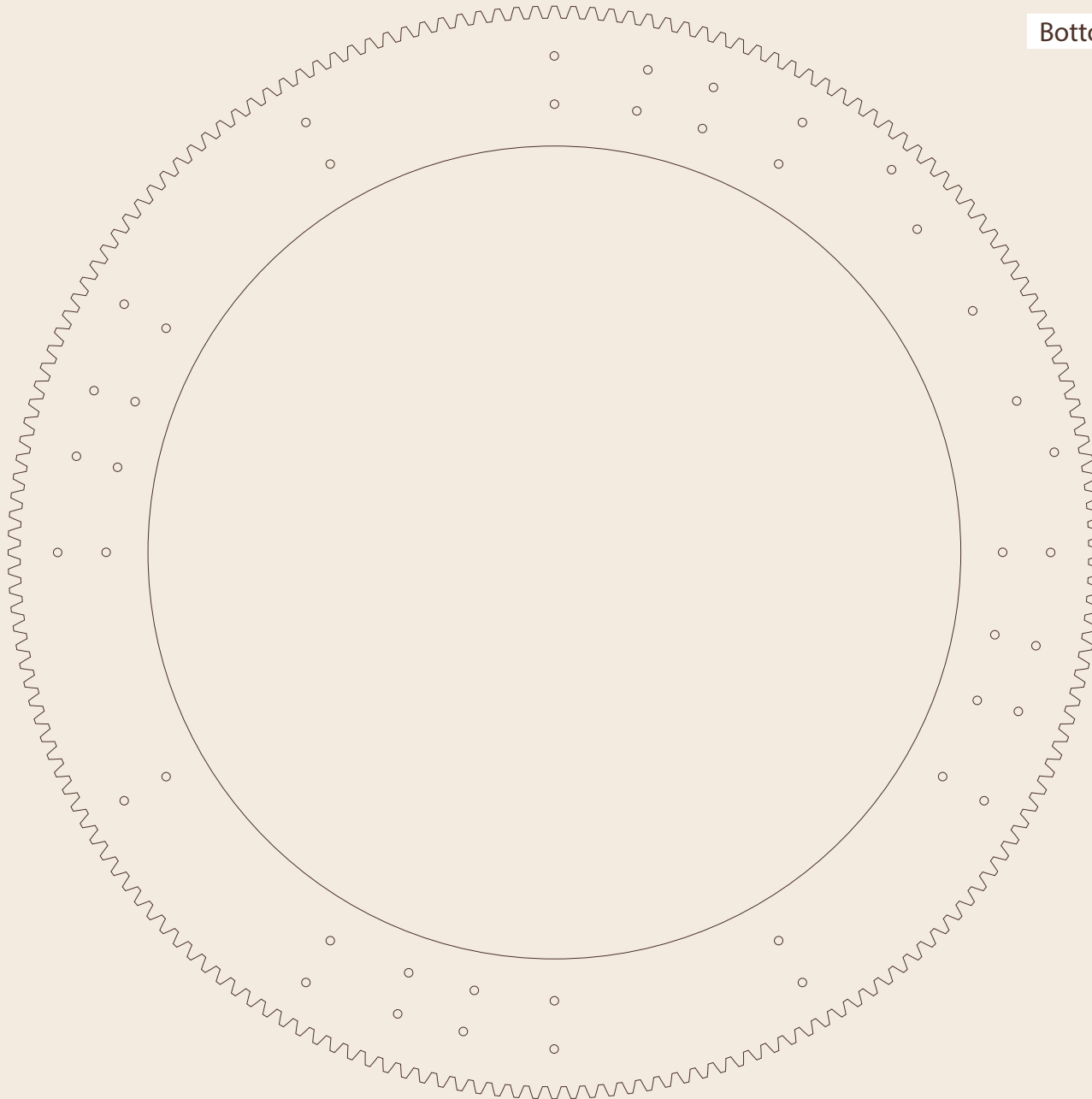
Connect to an outer with:
M2, Philips head screw, 8mm, 16

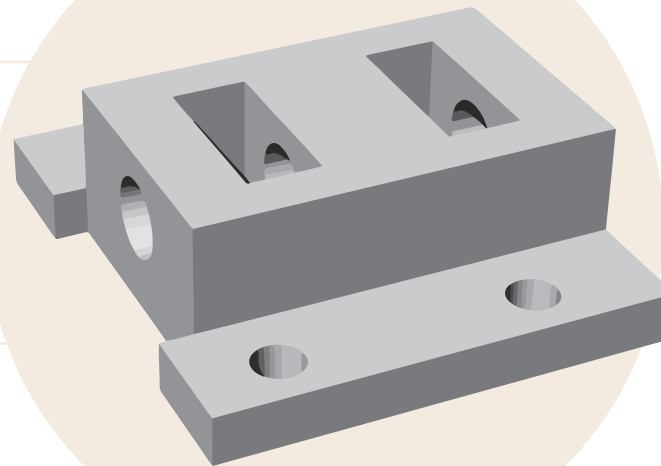
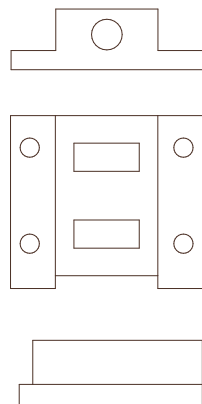
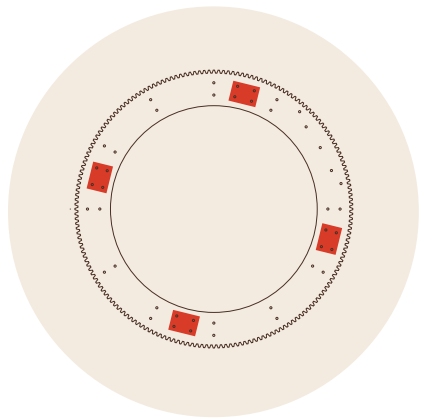




60 x Needle

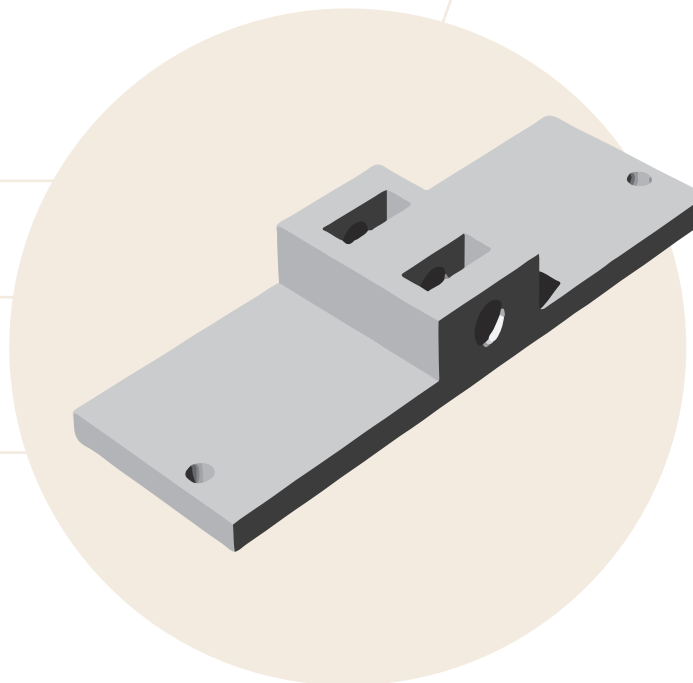
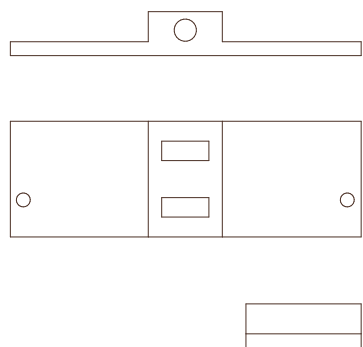
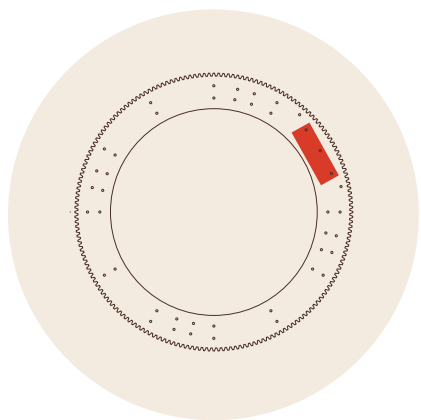
Bottom surface (big gear) + motor gears





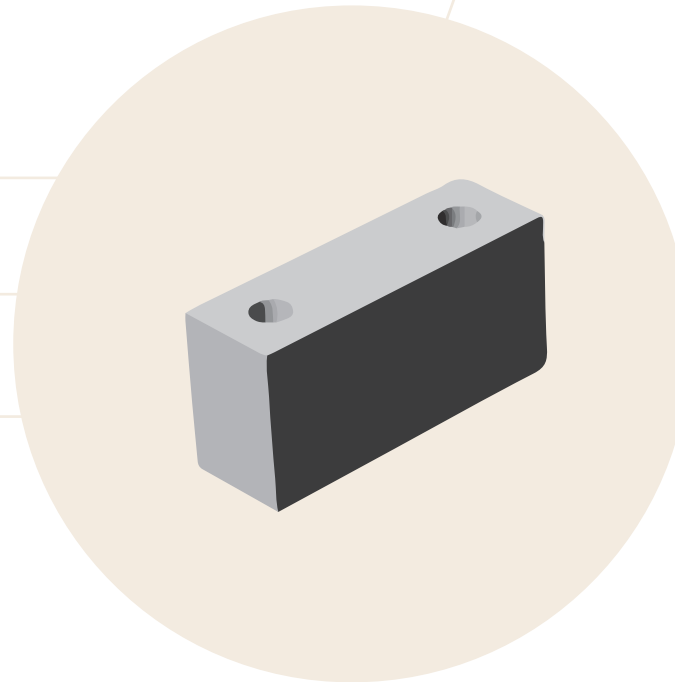
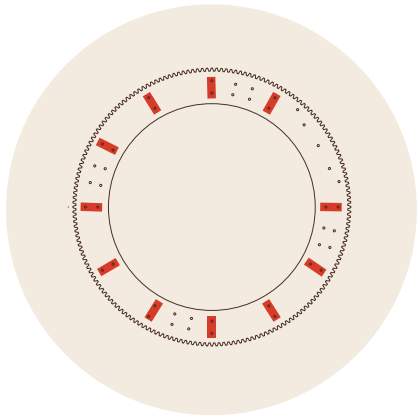
4 x Small bearings' holder

each bearing use:
1 x M5,DIN912 hex screw, 25mm
4 x M3,DIN912 hex screw, 12mm



Big bearings' holder

each bearing use:
1 x M5,DIN912 hex screw, 25mm
2 x M3,DIN912 hex screw, 12mm



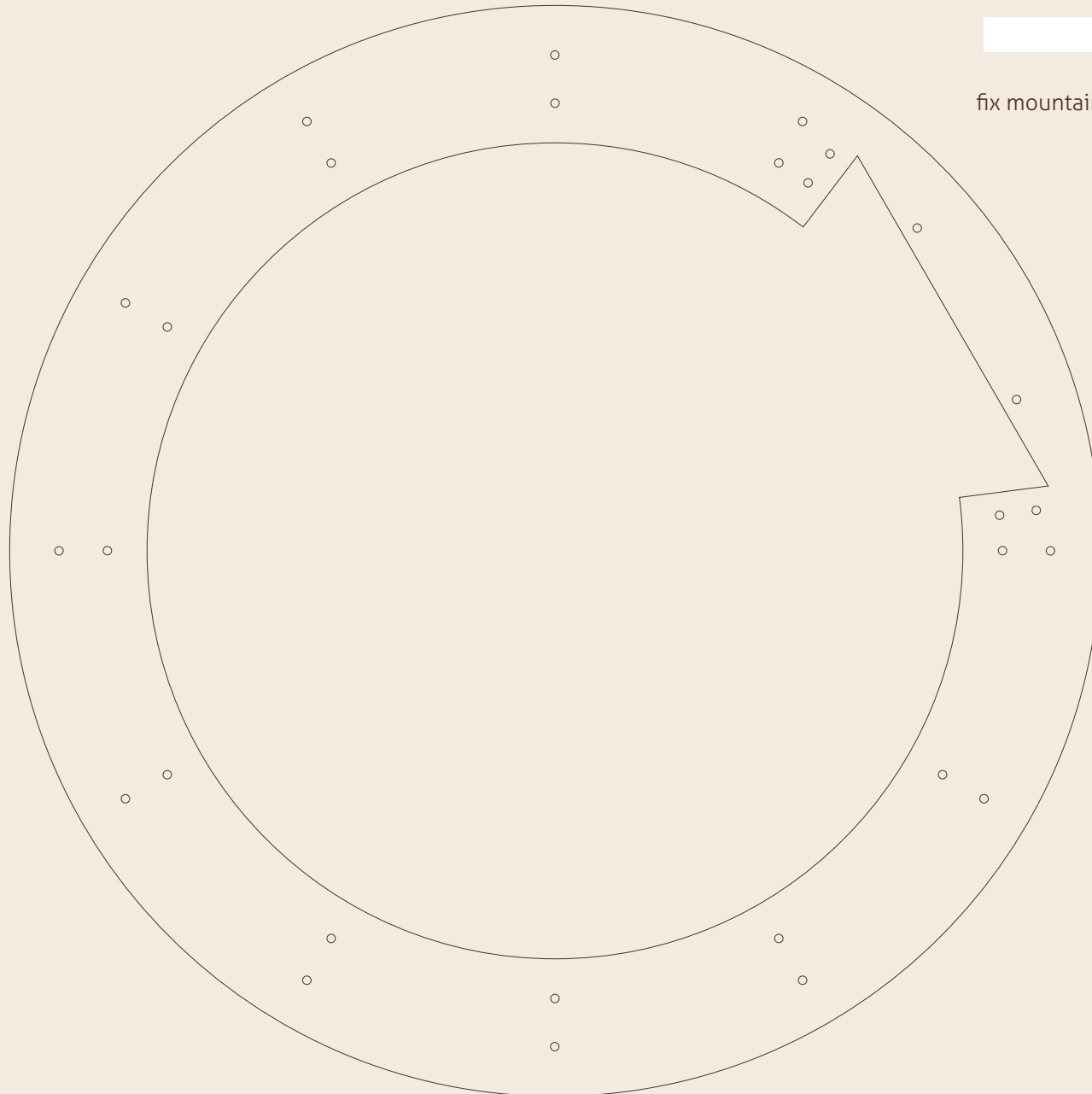
11 x Connector

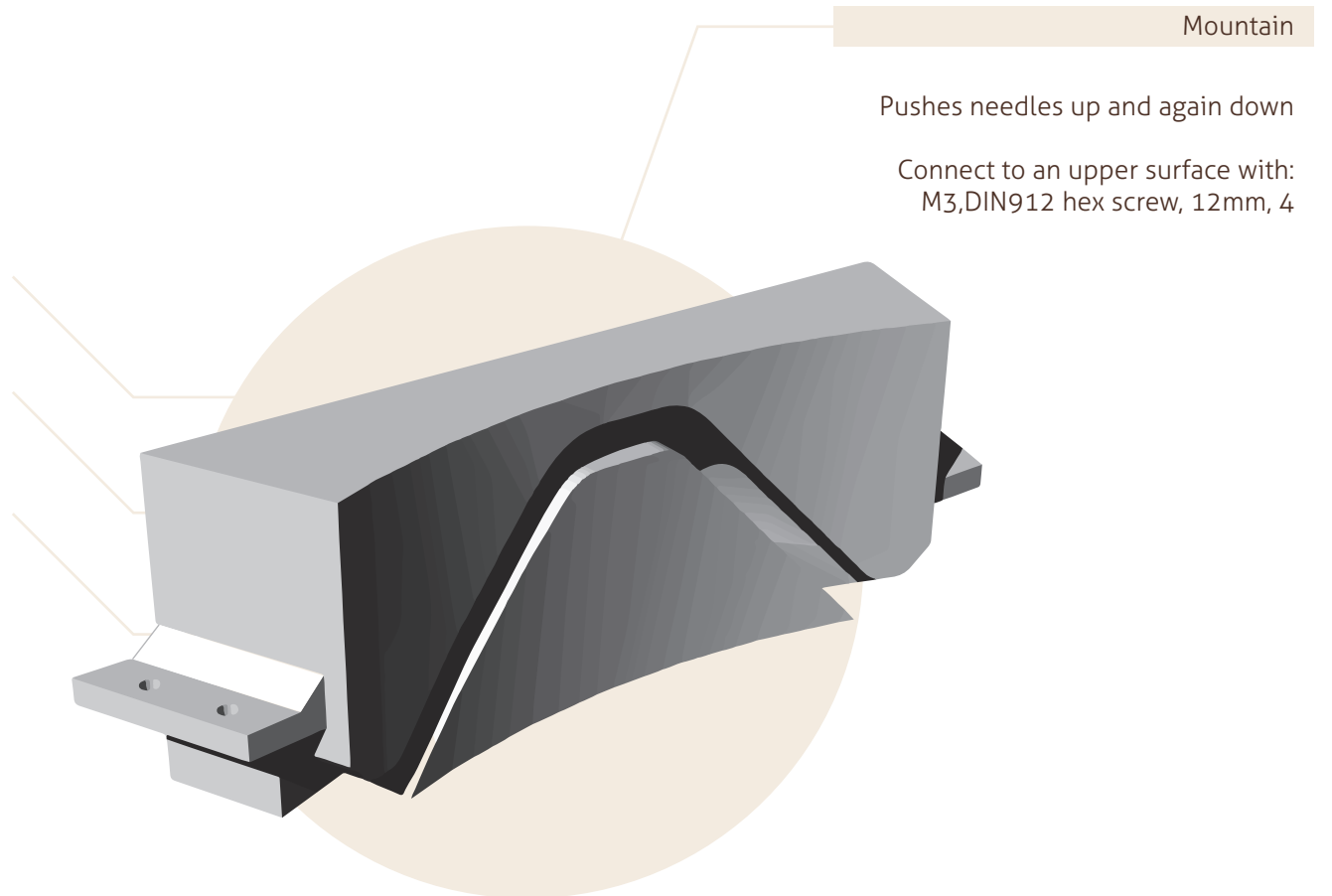
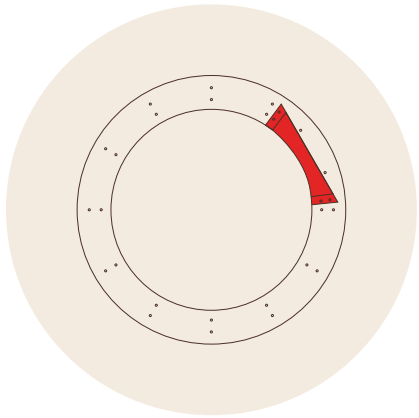
connects upper and bottom plates

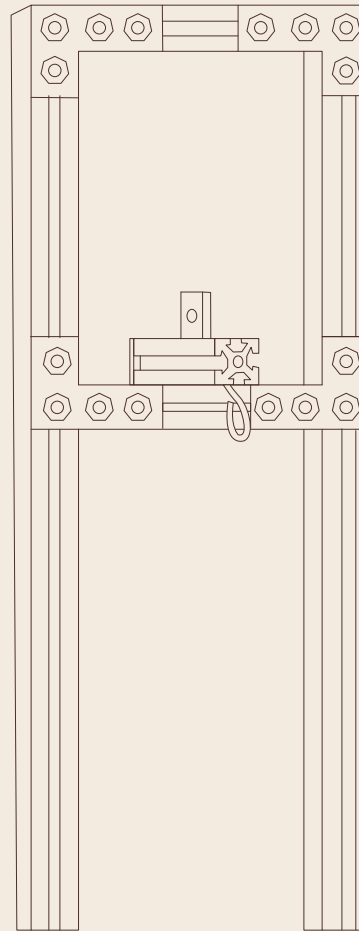
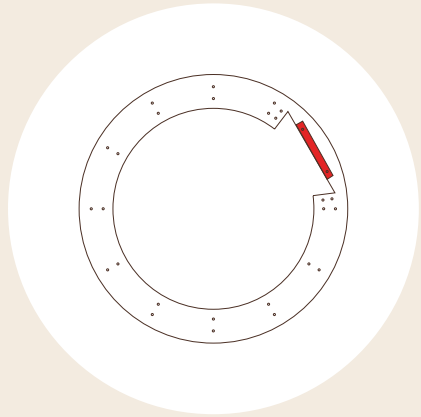
Connect to an upper surface with:
M3, DIN912 hex screw, 30mm, 22

Upper surface

fix mountain and makerbeam parts here





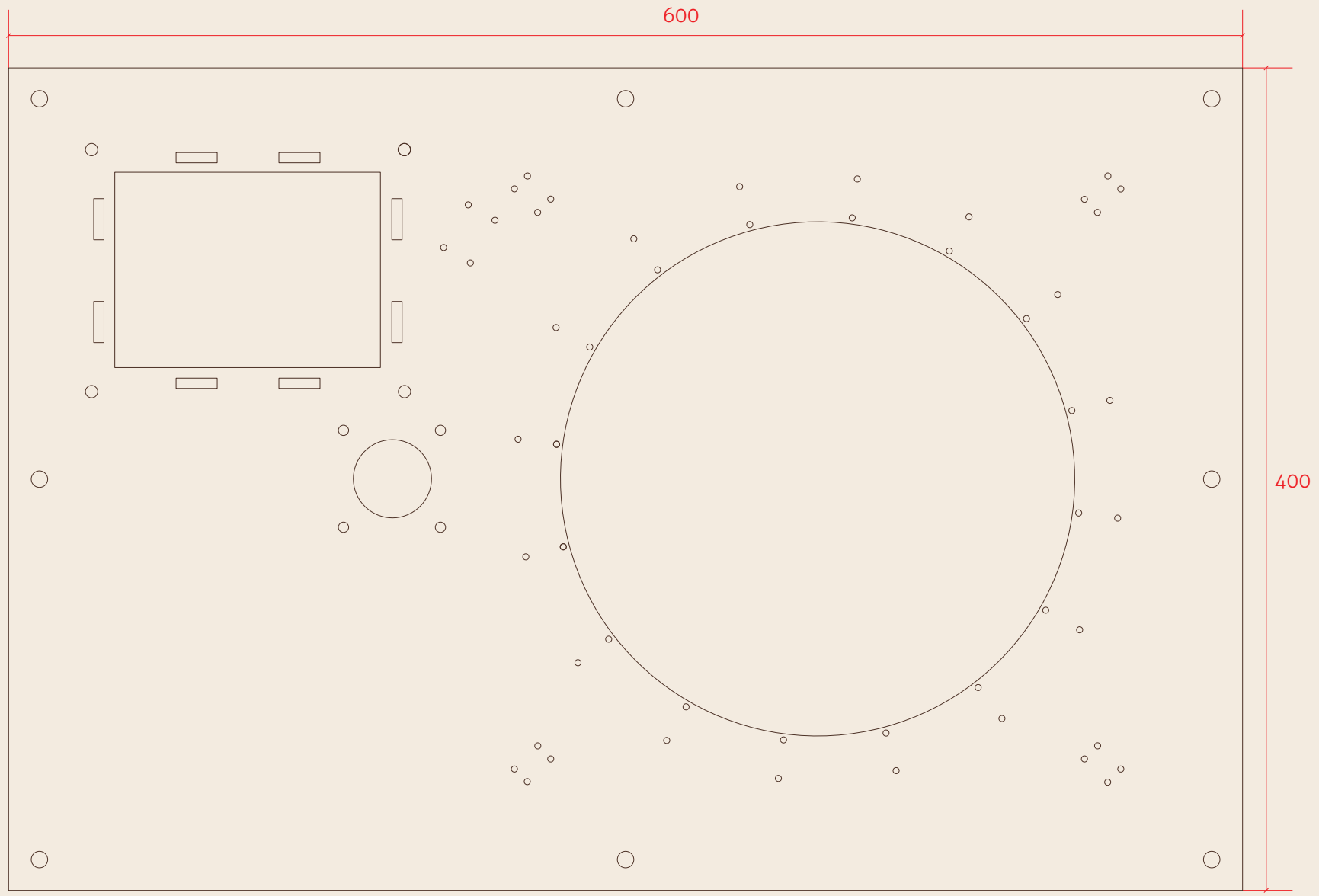


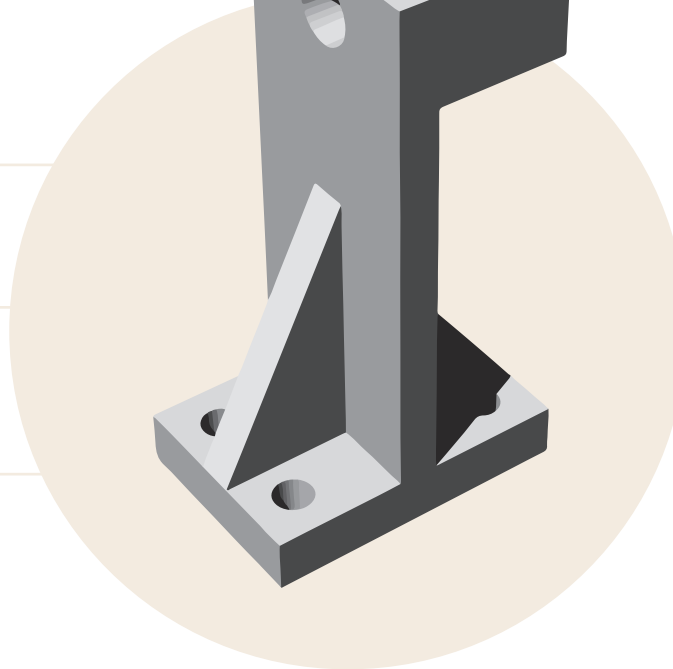
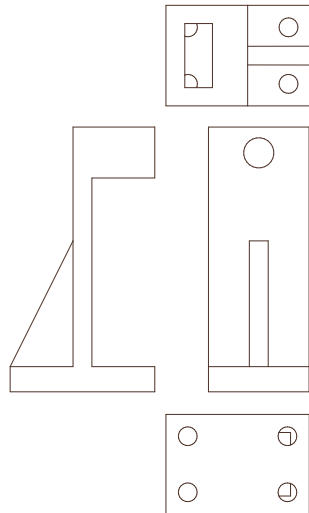
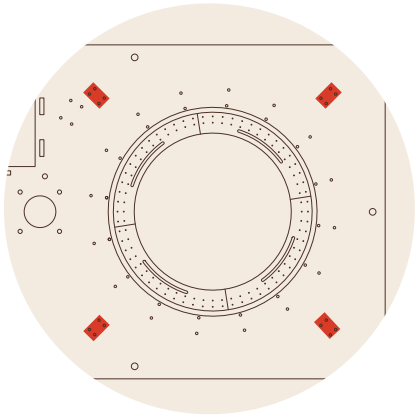
Yarn-feeder

Use 2 x 200mm beam
3 x 60mm beam
made out of makerbeam

Connect to a plate with:
M3,DIN912 hex screw, 12mm, 3;
Use makerbeam Lshape x 4;
makerbeam screws, 15

here will be mounted all the machine parts





4 x Z-shape

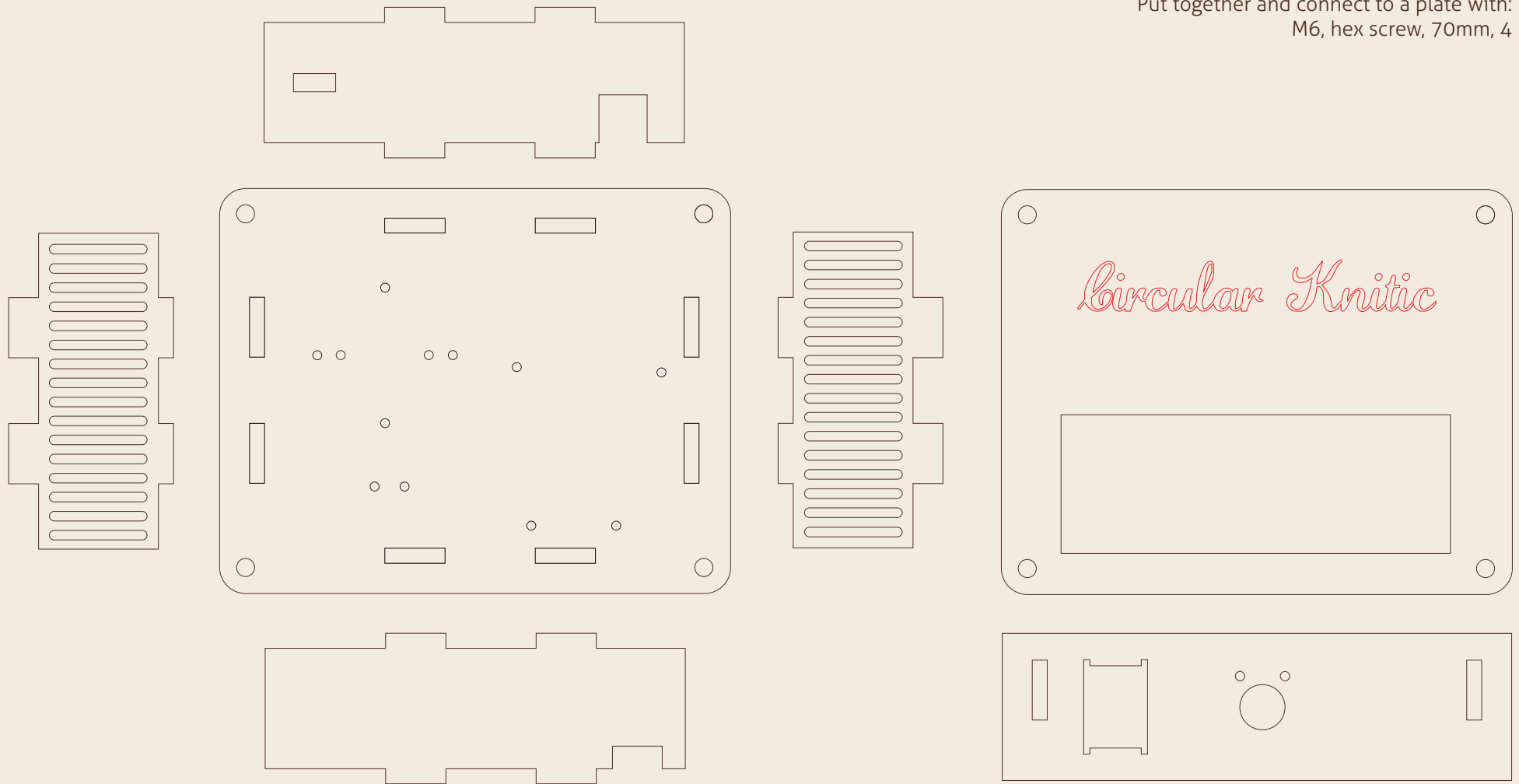
keeps the surfaces down and doesn't
allow to move them up

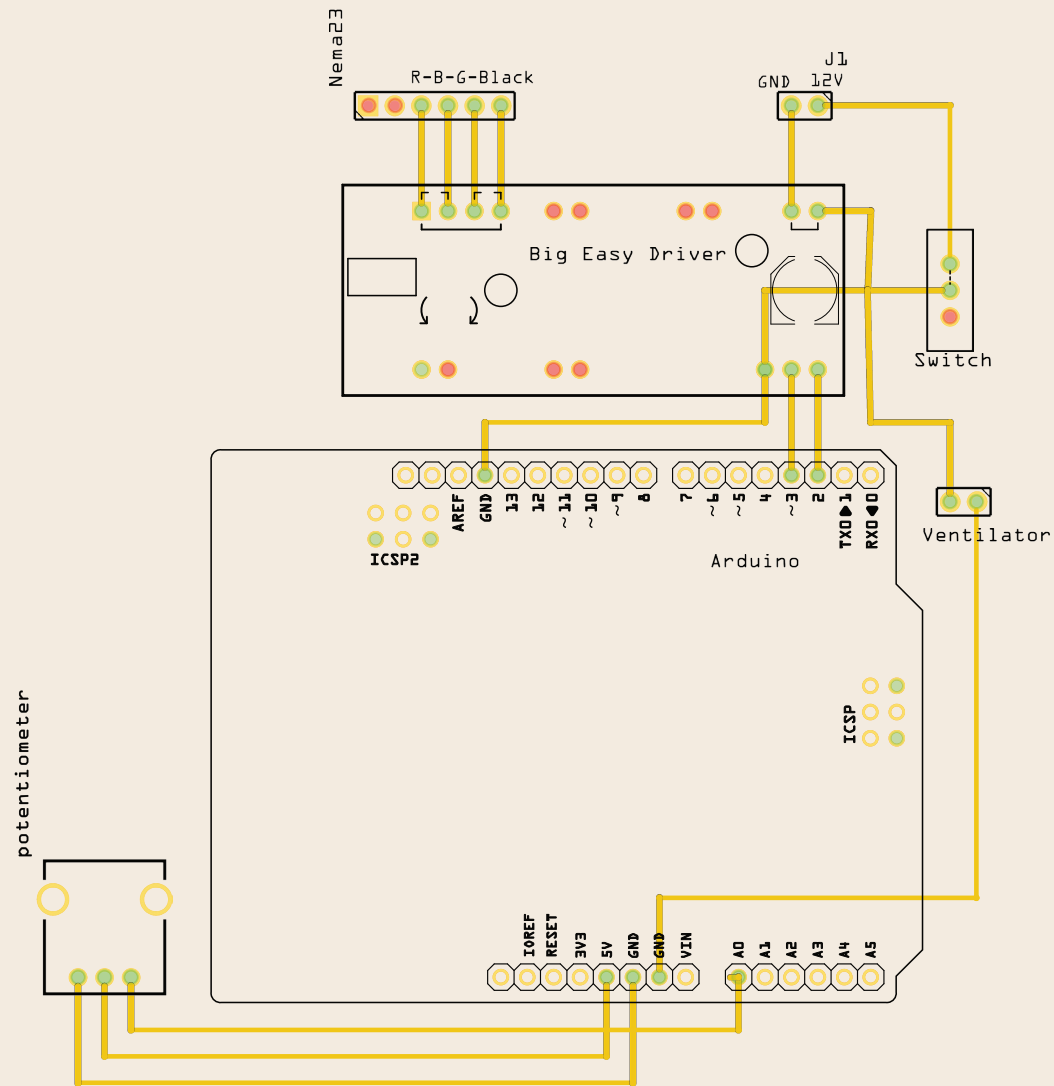
Place a bearing with:
M5,DIN912 hex screw, 16mm, 4.
Connect to a plate with:
M3,DIN912 hex screw, 12mm, 16

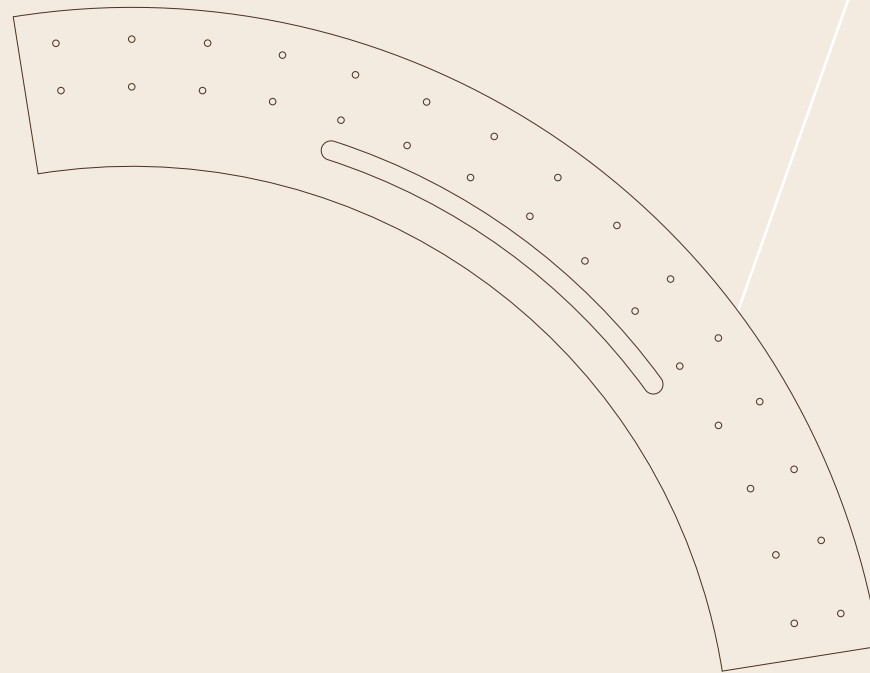
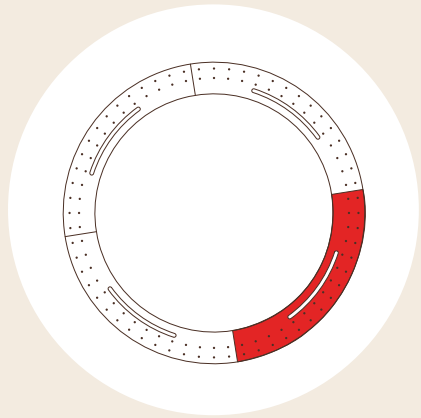
Box of electronics

here goes all the cables, basically: stepper motor driver, ventilator, switch, potentiometer, arduino, etc.

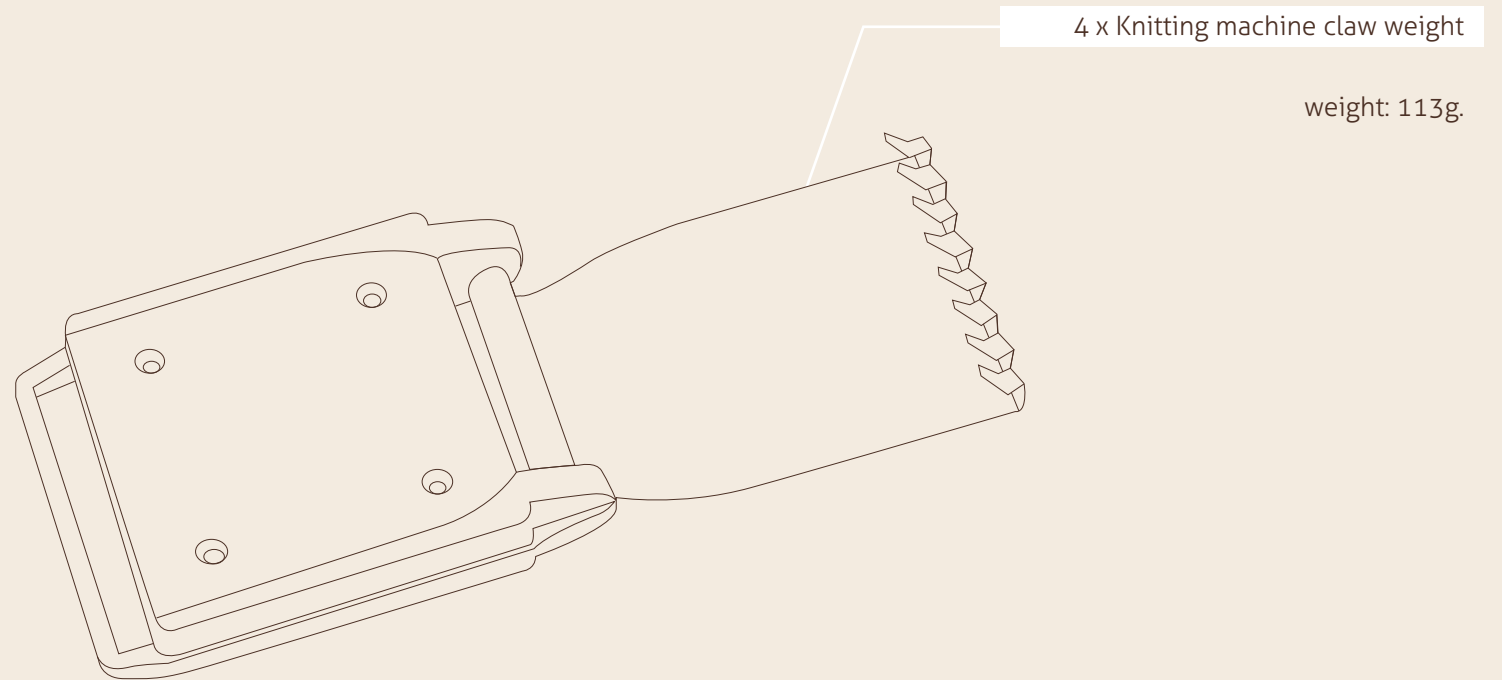
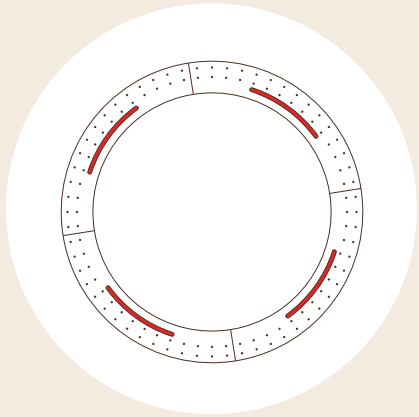
Put together and connect to a plate with:
M6, hex screw, 70mm, 4

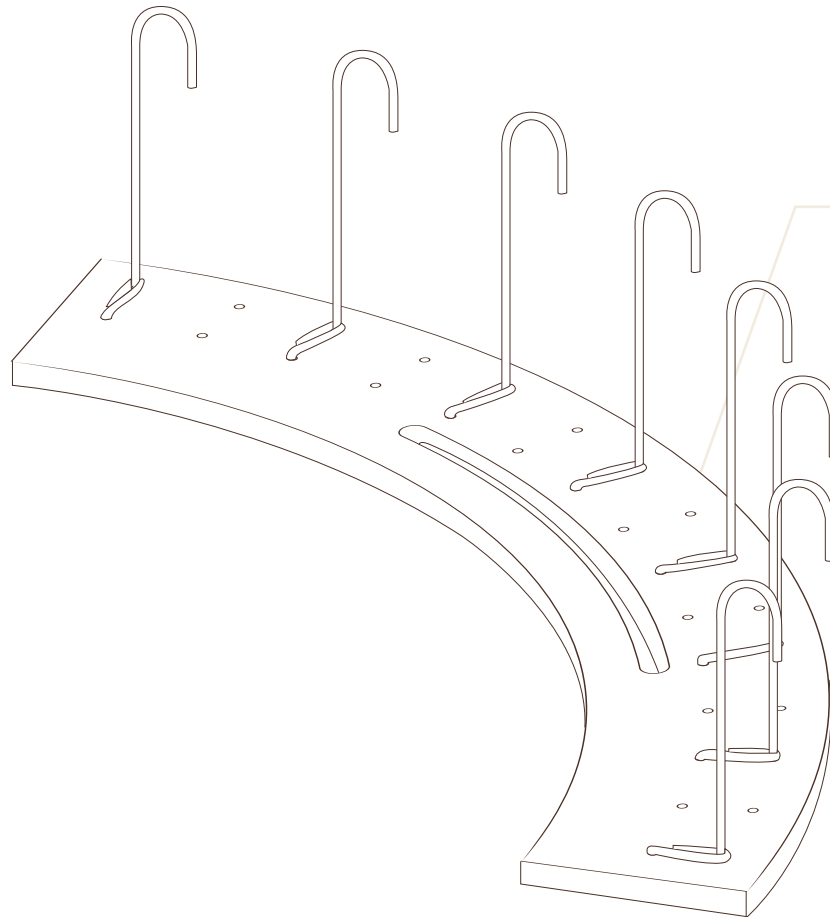
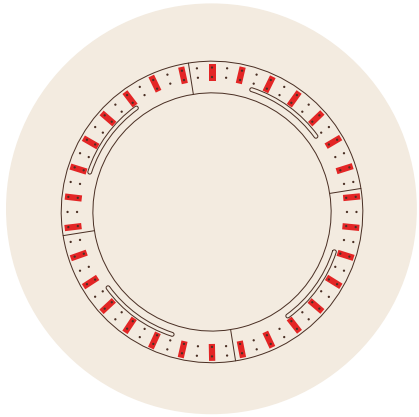






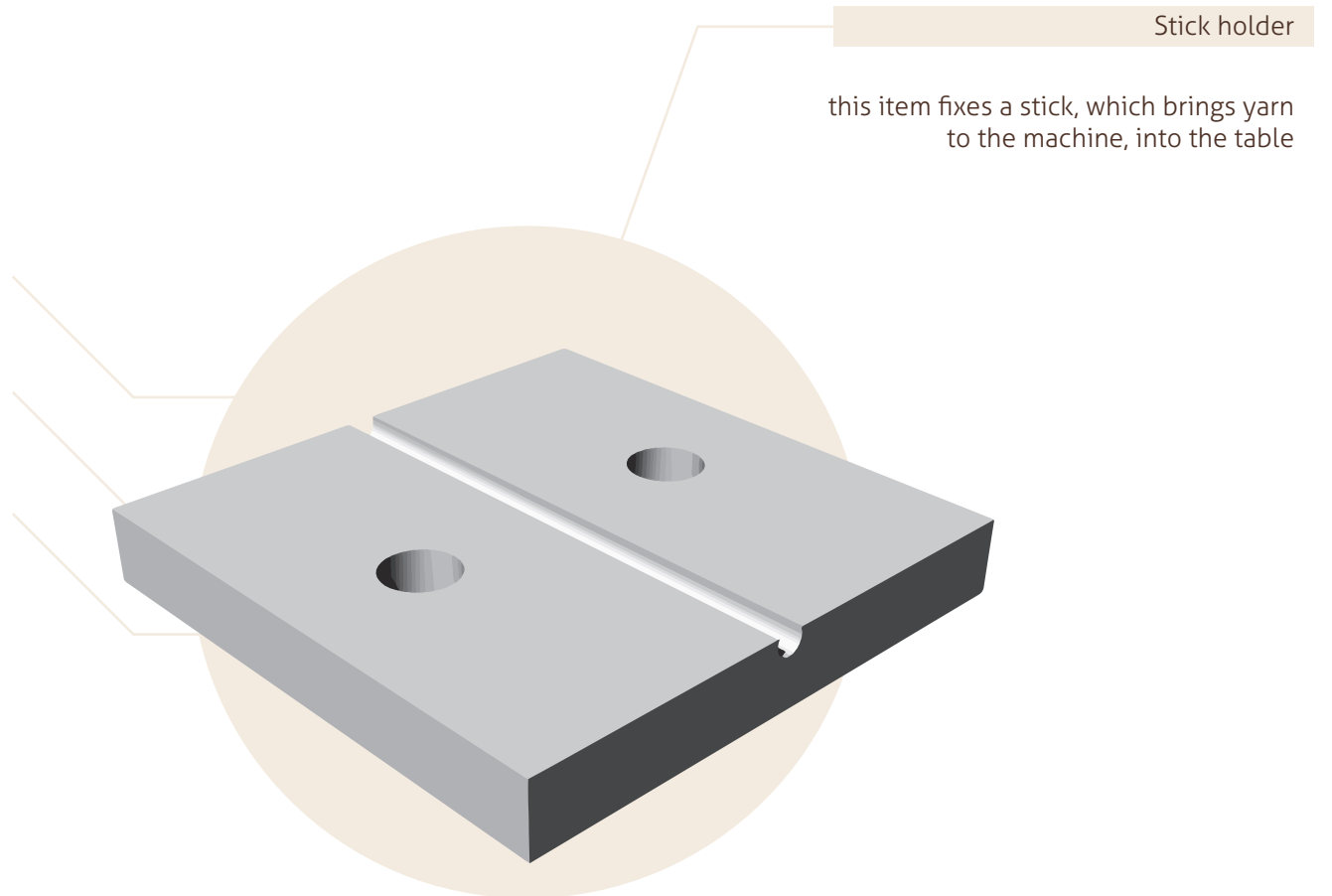
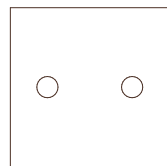
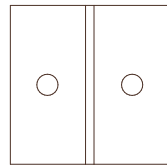
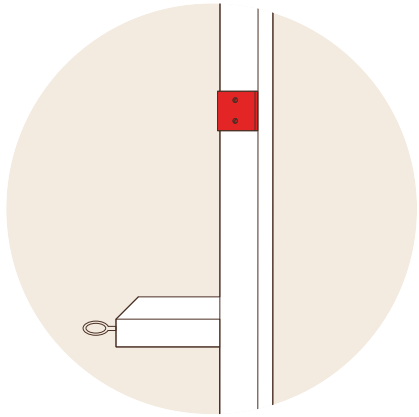
4 x weight holder

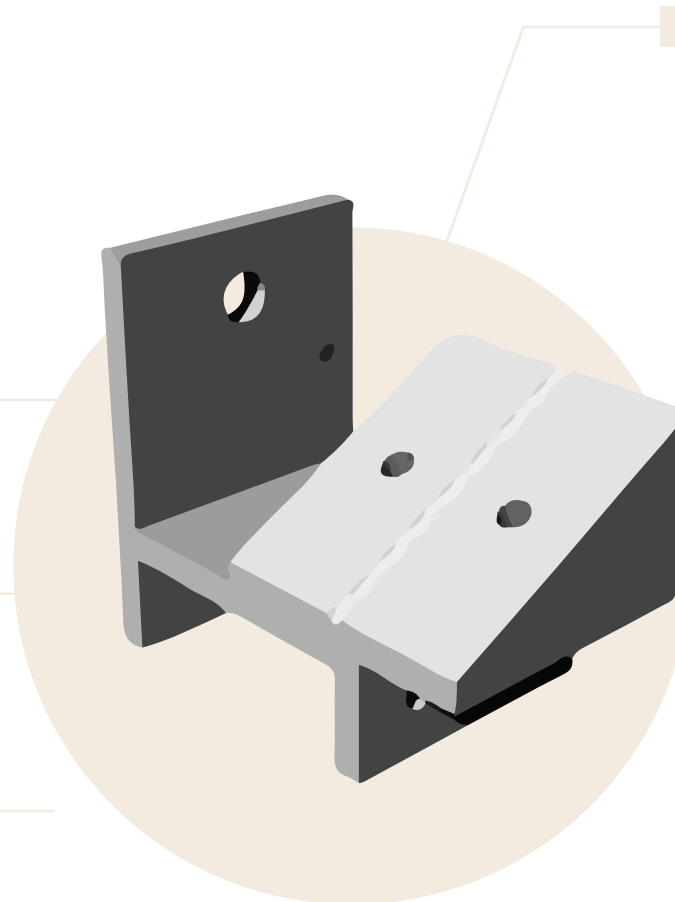
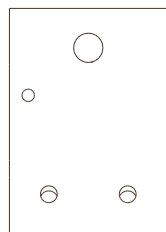
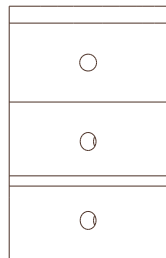
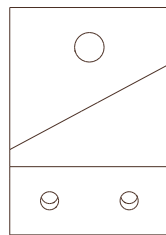
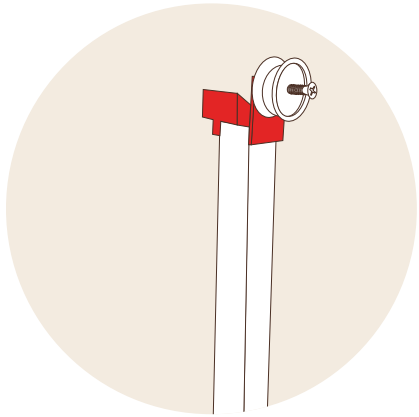




30 x Paper clip

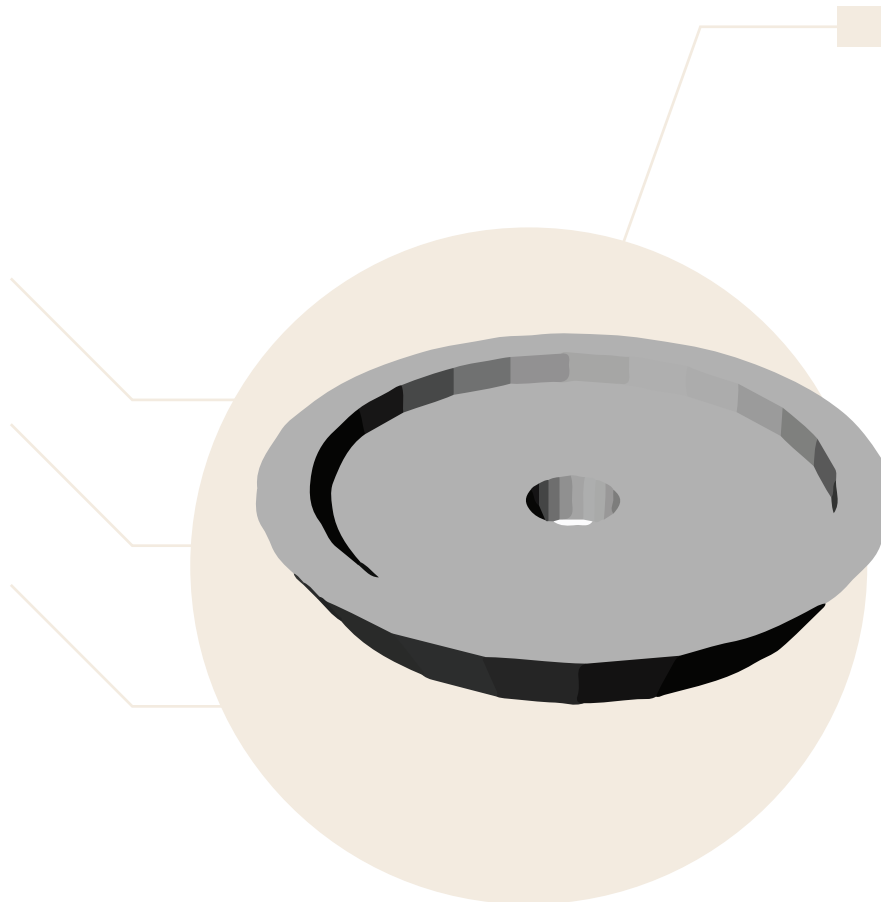
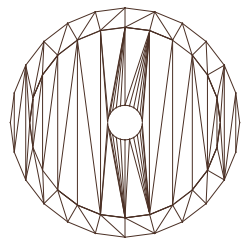
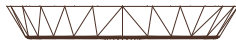
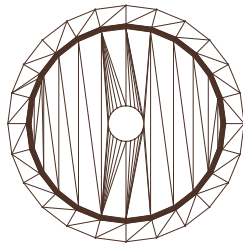
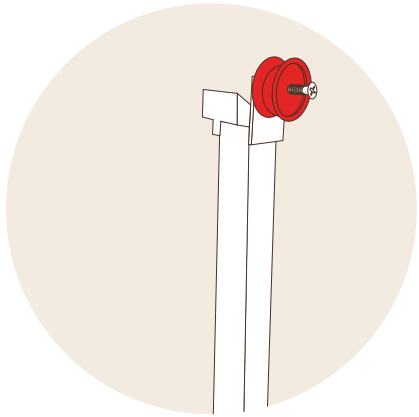
long: 50mm.





1 x Connector

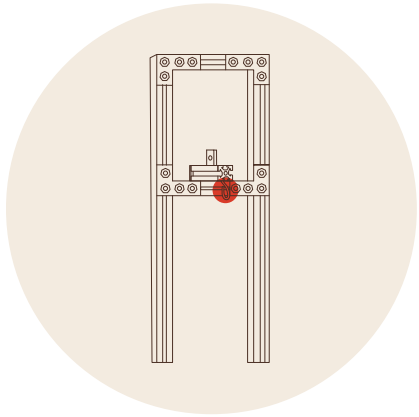
Mechanism for yarn tensioner.
Connects to the structure



2 x Spring

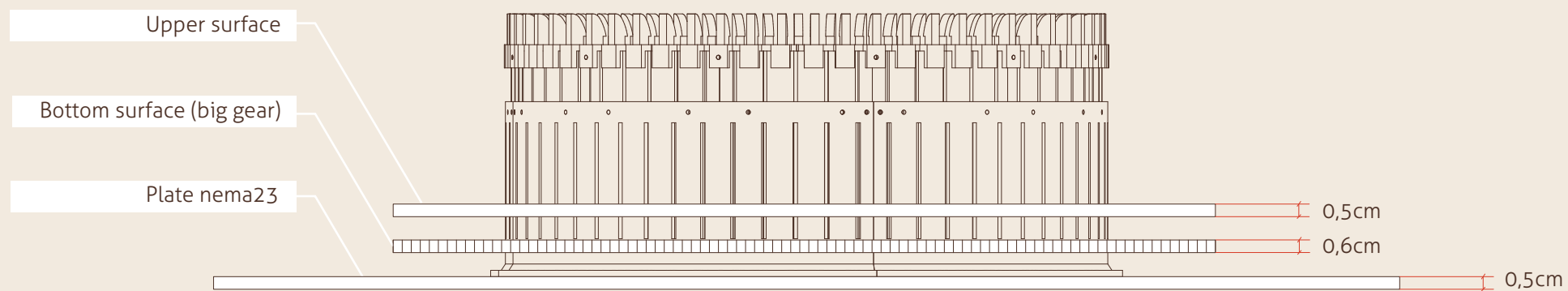
connects upper and bottom plates

Connect to an upper surface with:
M3, DIN912 hex screw, 30mm, 22



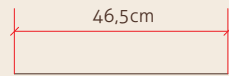
Metallic eight

thickness: plate and surfaces

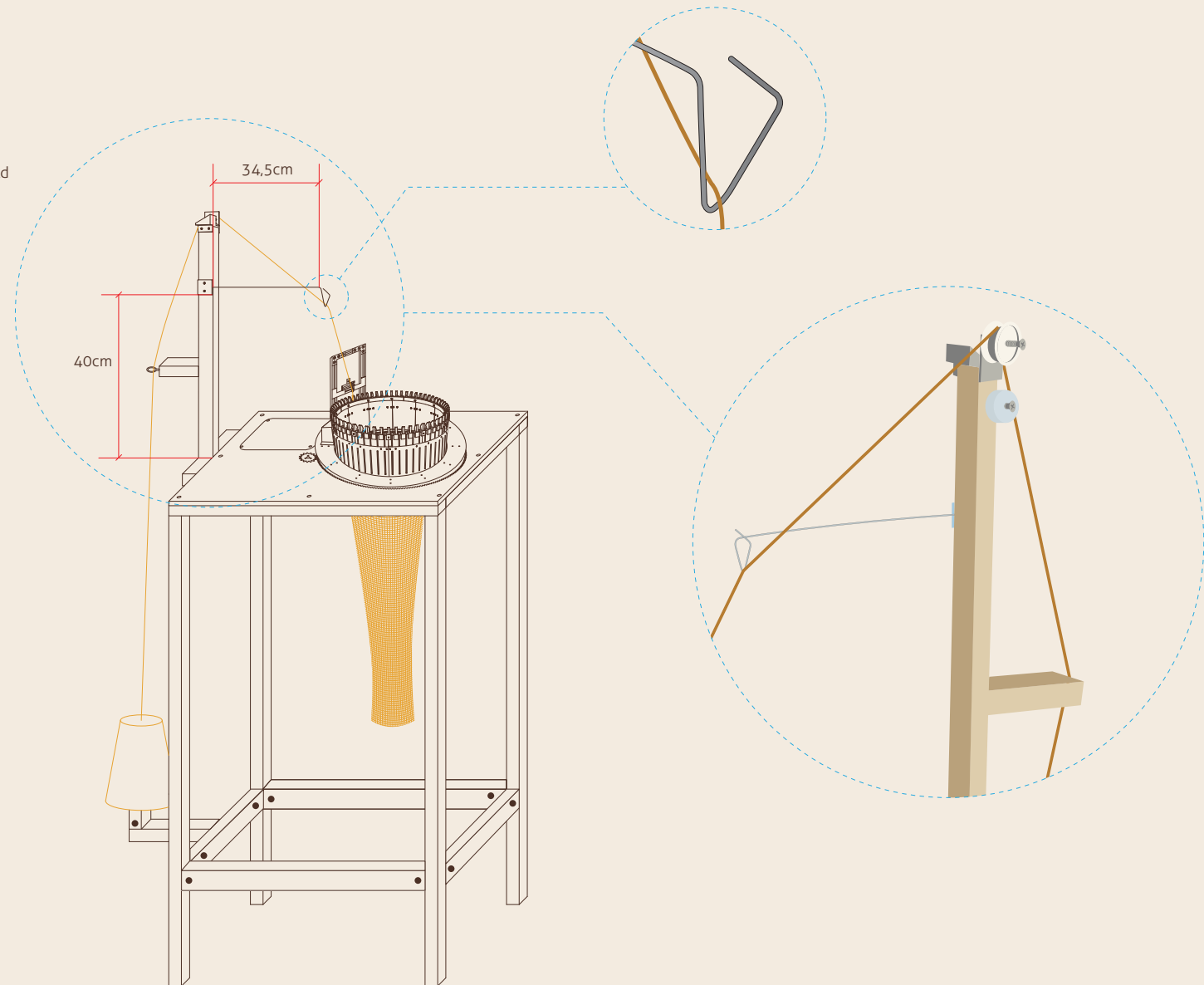
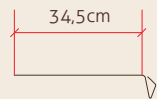


wire

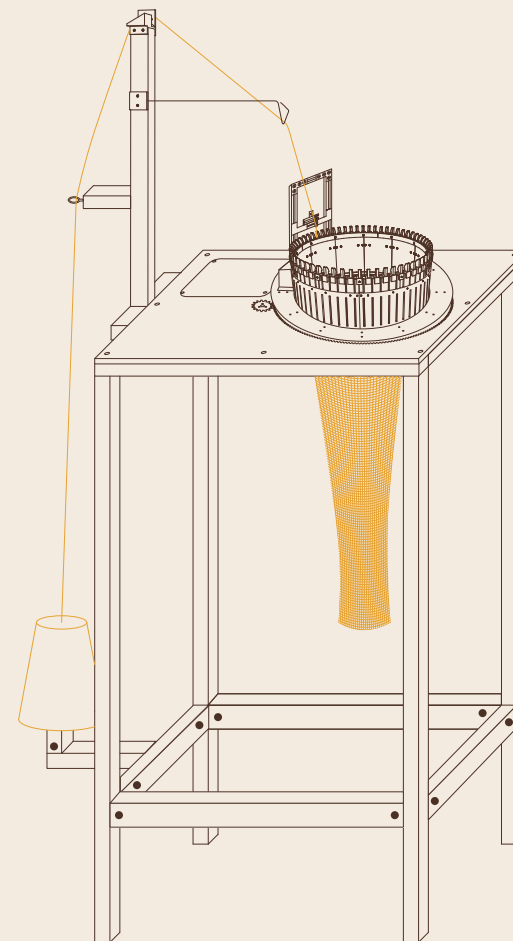
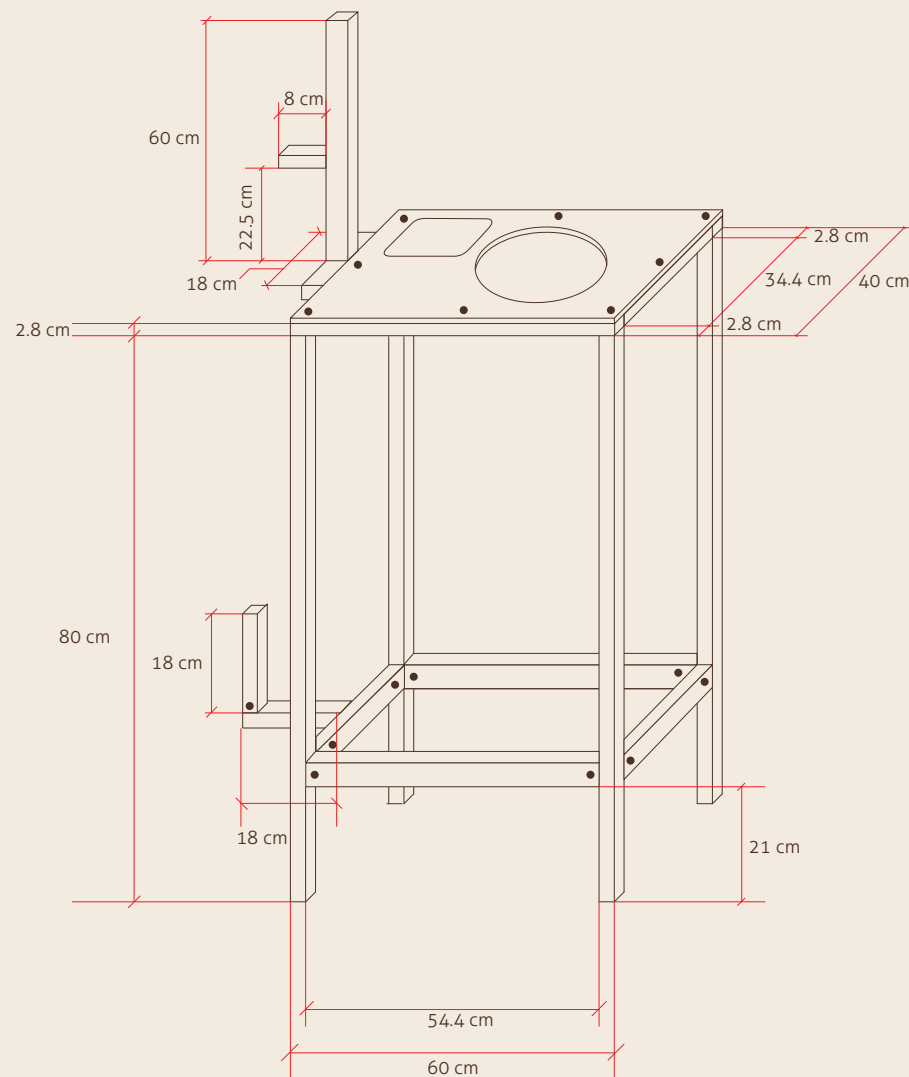
- ① measure of the wire



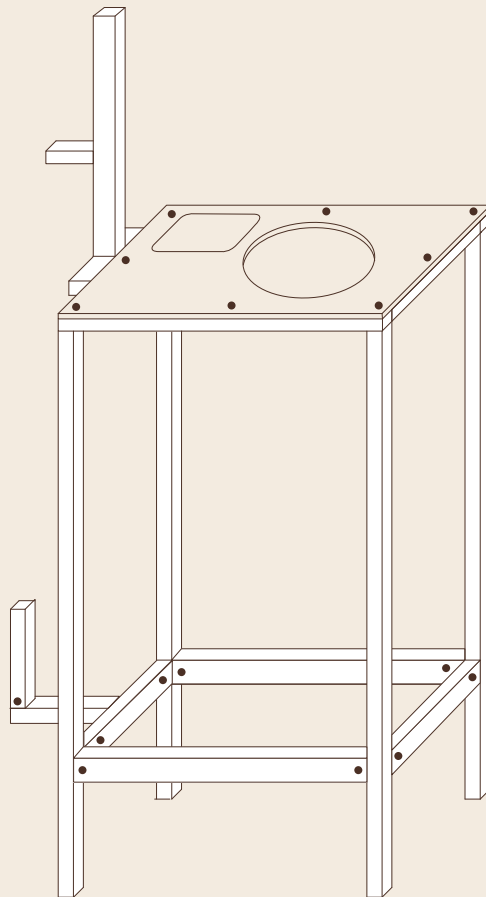
- ② measure of the wire until the fold



Circular Knitic table



Wood parts to create the machine frame



 80cm x 2.8cm (4 pieces)

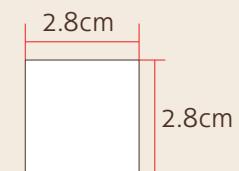
 60cm x 2.8cm (3 pieces)

 54.4cm x 2.8cm (2 pieces)

 34.4cm x 2.8cm (4 pieces)

 18cm x 2.8cm (3 pieces)

 8cm x 2.8cm (1 pieces)



All construction is based on wooden sticks of 2.8cm x 2.8cm

Screws circular Knitic

Size	Type	Long	Quantity	Use
M2	Philips head screw	8mm	16	attach inners with outer
M2	Philips head screw	12 mm	28	attach inners with outer connections, yarn holders
M2	Steel nut		44	
M3	DIN912 hex screw	12mm	49	attach outers to plexi, and z-shape, small and big bearings' holders, mountain, construction from makerbeam
M3	DIN912 hex screw	16mm	5	attach gear on the stepper motor
M3	DIN912 hex screw	30mm	22	attach gear wheel with spacers
M3	Steel nut		94	
M3	Washer		16	attach plate, etc
M5	Screw	16mm	4	attach bearing, attach stepper motor, Z-shape
M5	Screw	25mm	5	attach bearing
M5	Steel nylon lock nut		4	motor
M5	Screw	20mm	4	attach stepper motor
M6	Philips head	70mm	4	mount the electronic box
M6	Steel nut		4	mount the electronic box
M6	Wing steel nut		4	mount the electronic box
3,0	Hospa screws	20mm	94	mount wood frame

other parts

Size	Type		Long	Quantity	Use
	Makerbeam		150mm	2	Yarn Feeder
	Makerbeam		60mm	3	Yarn Feeder
	L-shape makerbeam 90degrees			6	Yarn Feeder
M3	Makerbeam screw		6mm	24	Yarn Feeder
XKN8	Needles			60	
	8-shape			4	
	Claw weight			4	
	Bearings	bore 5 x 10 x 4mm	14		
	Metallic angle	25x25 x 15 x 2mm	28		Mount wood frame
	Paper clips		50mm	60	
	Carbon fiber tensor		550 x 2mm	1	
	Spring Kit: M5, 50mm screw + nut, spring				Yarn Tensioner
Electronics					
	BigEasyDriver + cooler				
	Arduino Uno + power socket				
	Ventilator + 2 x holders + 4 x M3, 16mm screw				
	Potentiometer + cup + 2 x M3, 20mm screw + 6 nuts + header				
	Switch				
	2-pin terminal x 3				
	Stepper motor + shaft				
	Power supply + electricity plug				
	Wires and cables				



Curated by

David Cuartielles

20th December 2014 - 31th July 2015

Commissioned by



More info:

www.knitic.com - www.var-mar.info

Catalog design: Jesús Rodríguez