

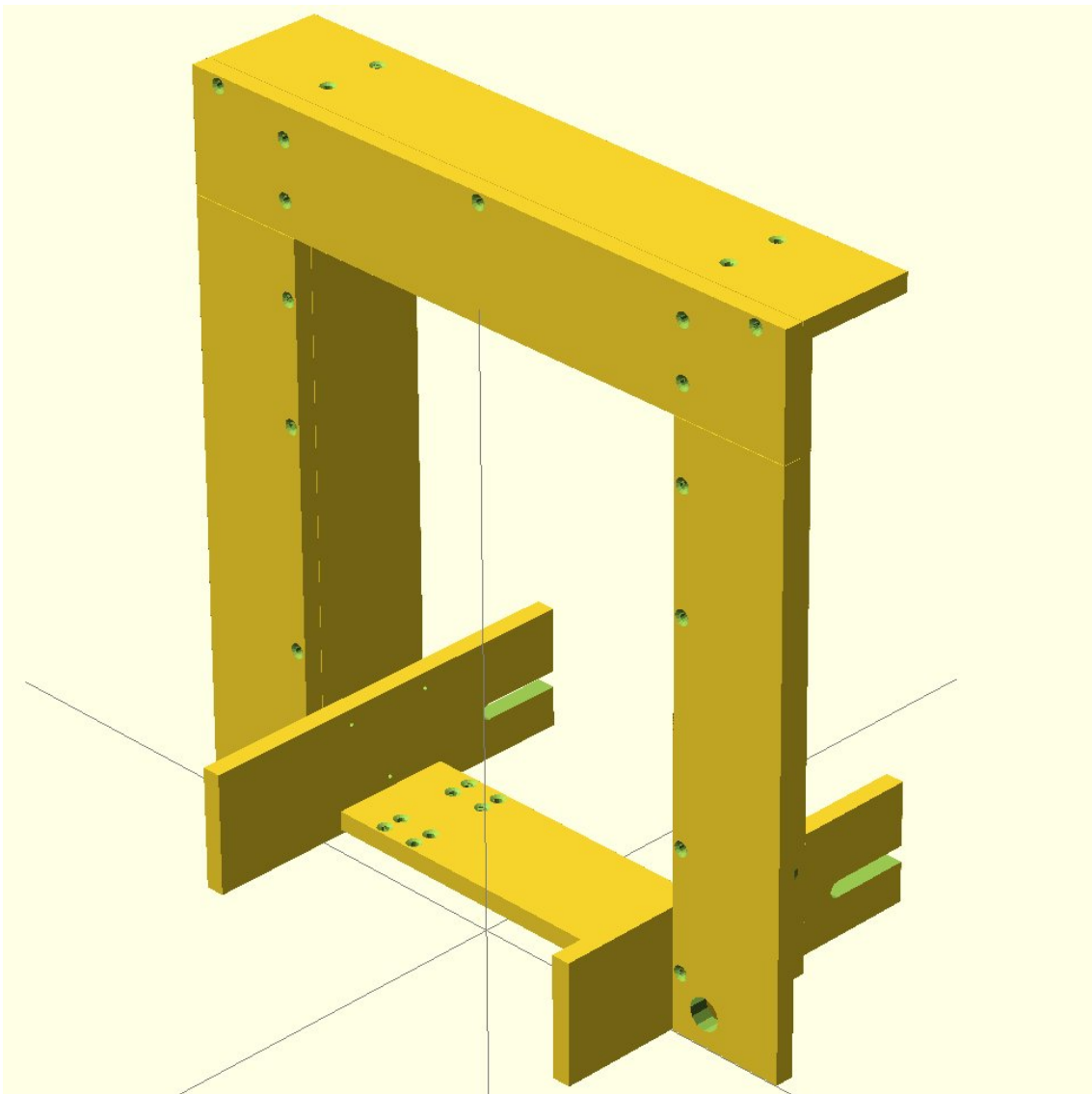
# Boxed Frame for RepRap Prusa i3

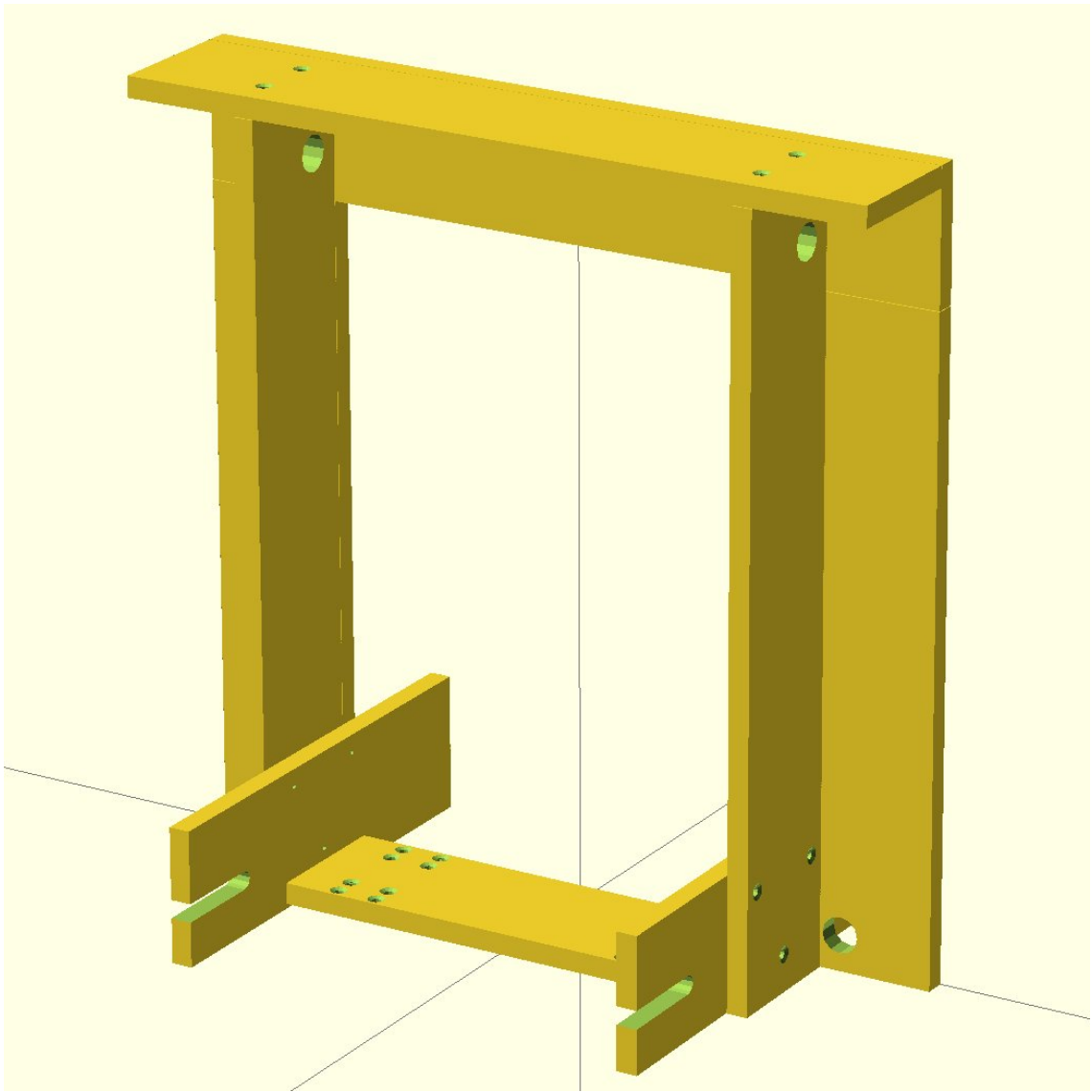
(Design by Heinz Spiess, Aegerten, Switzerland)

This is a very simple boxed frame for the Reprap Prusa i3 3D printer, optimized for manual construction. It is based on nine small boards of with 12mm thickness and 88mm width. Three of the boards (left and right stand walls and bottom plate) stabilize the Y-axis. The remaining six boards (left and right side and front walls, front top and top plate) constitute the frame for the X-Z plane. While most of the boards are joined with wood screws, the Y-axis part is mounted to the X-Z plane part by means of M4 machine screws, so that the two parts can easily be separated for transport.

This document contains actual size sawing and drilling guides for each of the boards. Print pages 3-11 without any scaling(!) and cut out the boards guides. As the longer boards don't fit on an A4 sheet, these are printed in two parts which have to be glued or taped together.

The Y-axis part is assuming a standard rod configuration, i.e. M10 long threaded rods at 20mm center height (touching base plate!), M8 short threaded rods at 10mm and 30mm (cut-out slots in stand walls!) center height and M8 smooth rods.



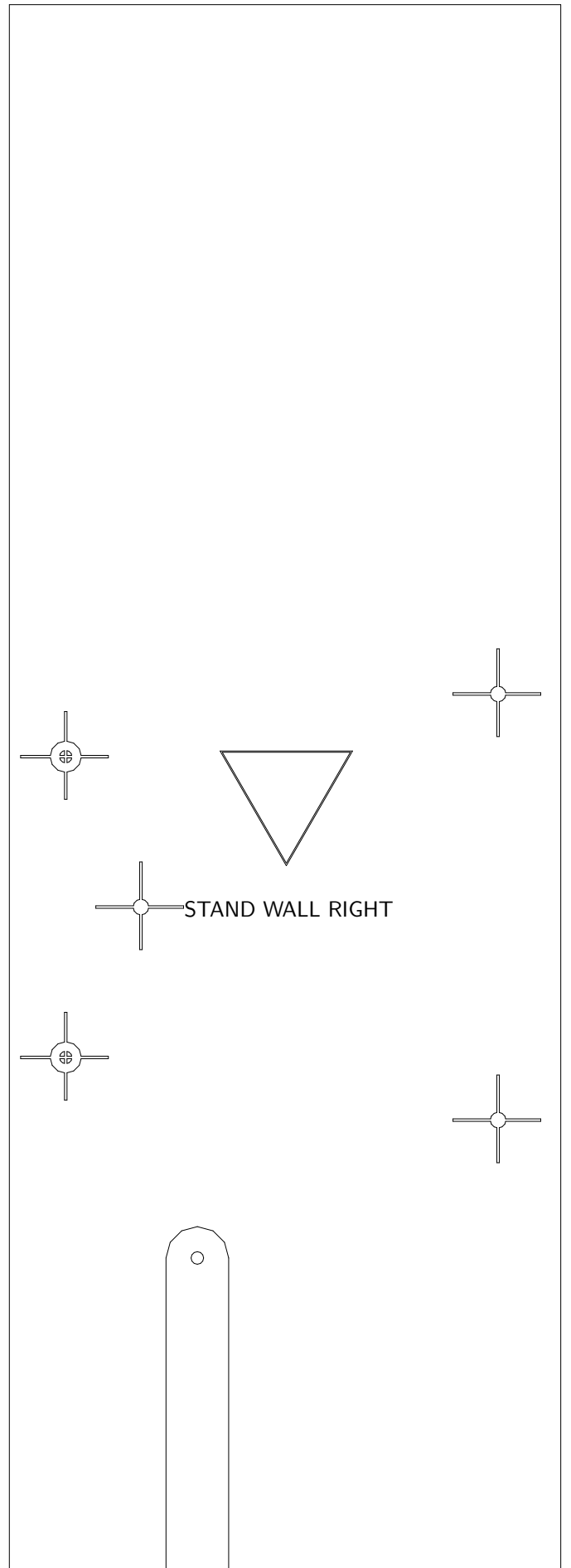
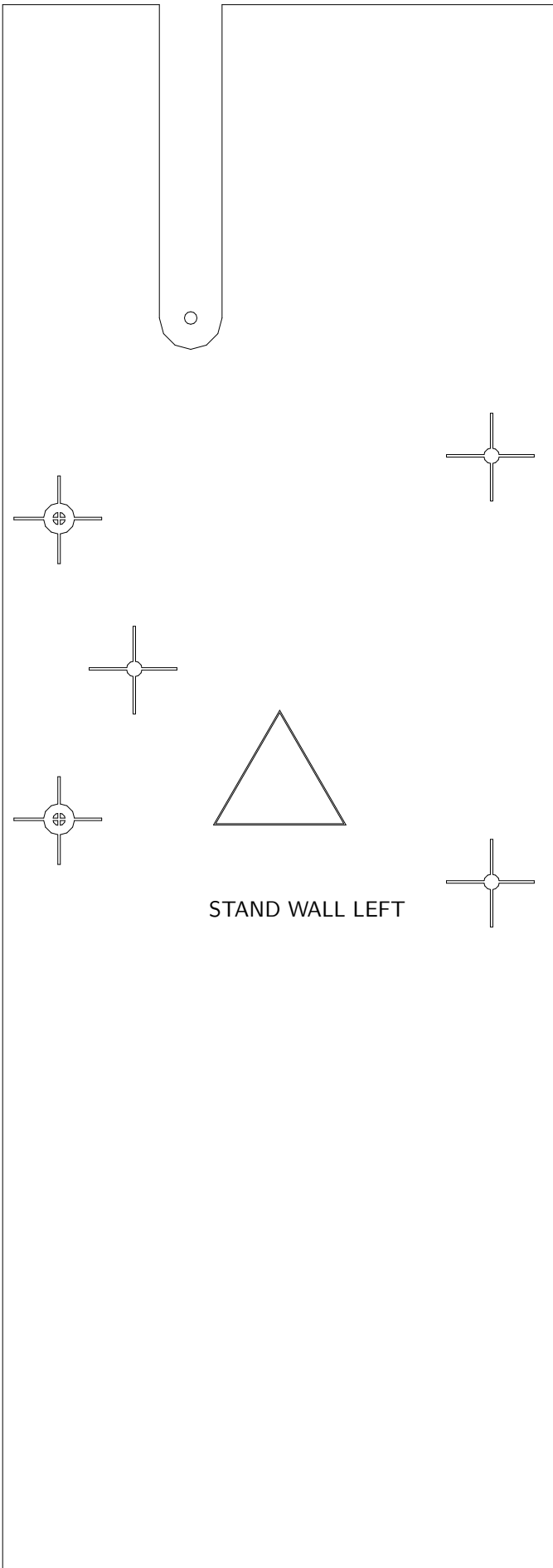


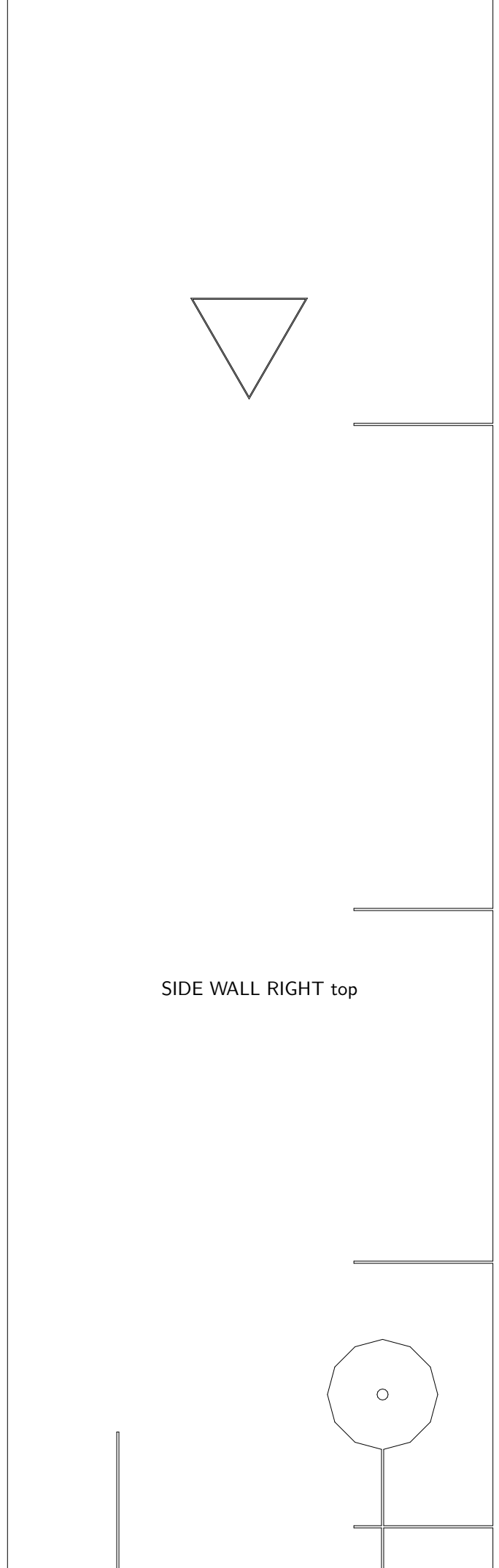
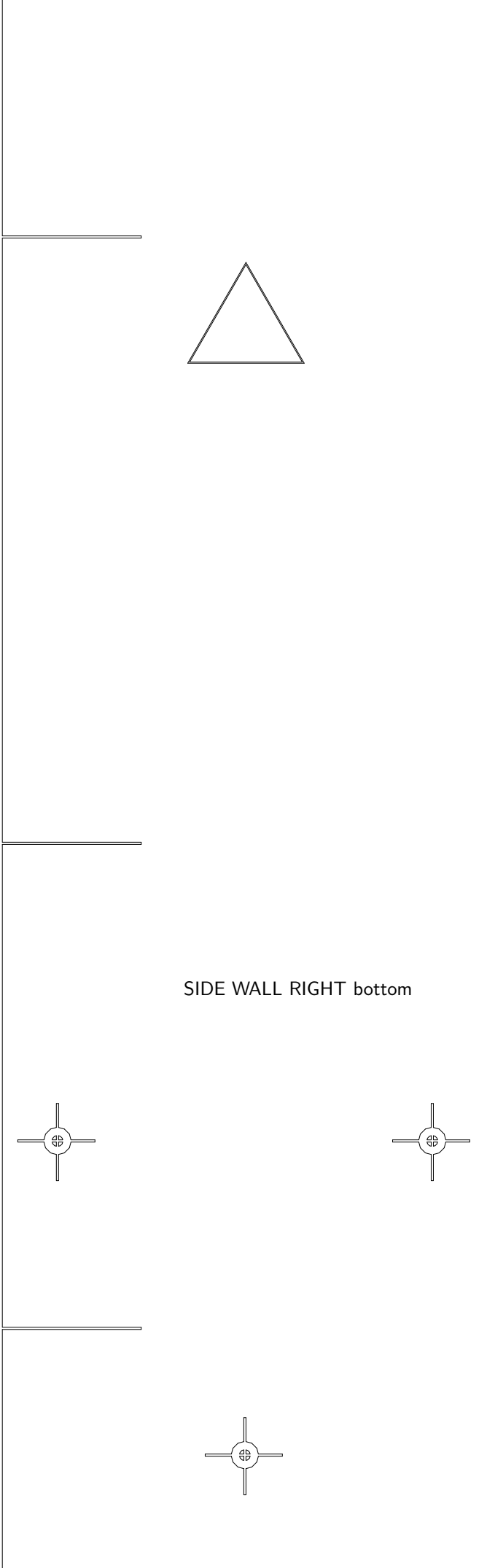
### Boxed Frame

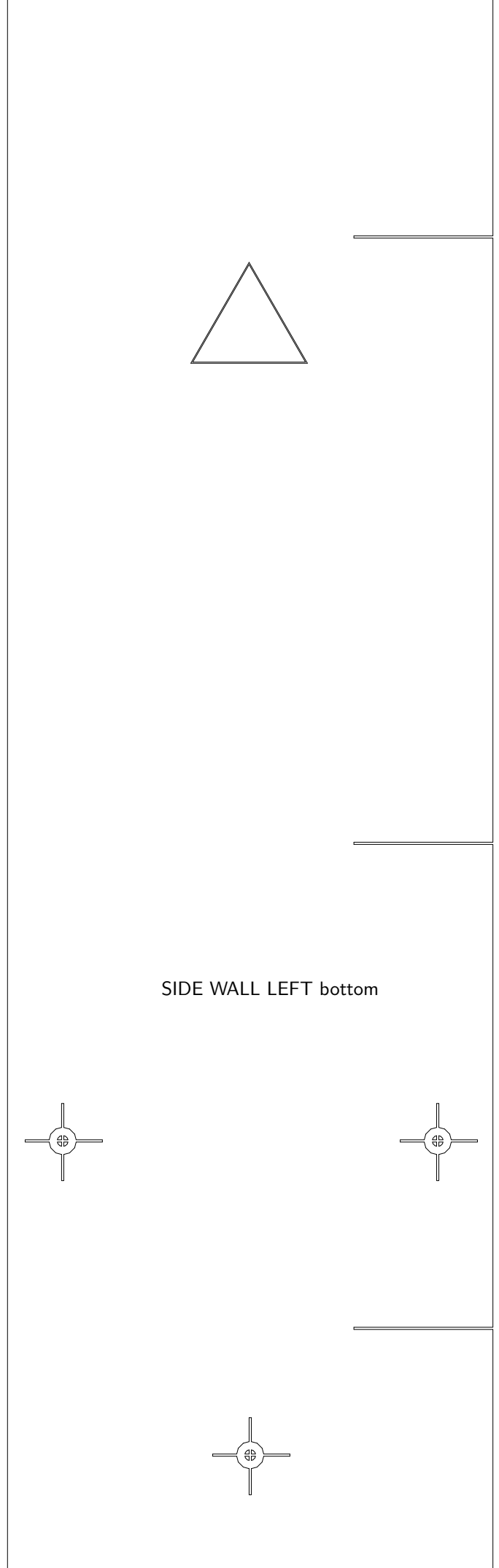
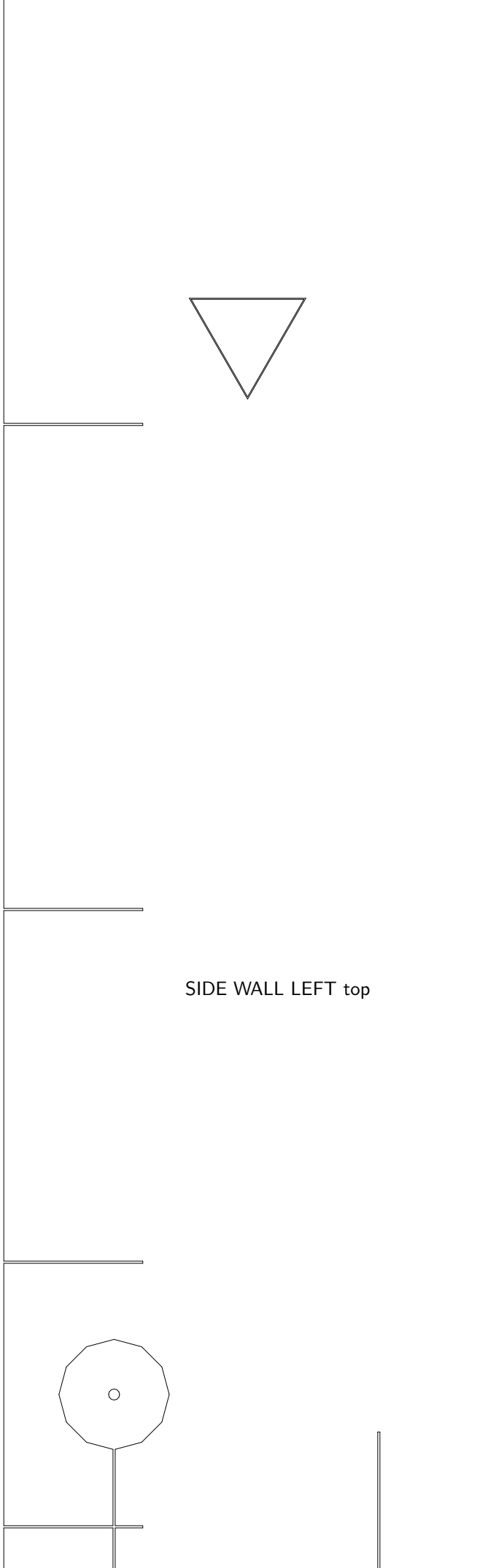
Board	Count	L x W x H (mm)	A (m <sup>2</sup> )	Screws	Comment
Stand walls	2	250 x 88 x 12	0.0440	4*4x35 wood screws	10x55mm slot
Side walls	2	450 x 88 x 12	0.0792	6*M4x30 + nuts	20mm cable hole
Front walls	2	374 x 88 x 12	0.0658	8*4x35 wood screws 2*4x25 + 2*4x16	20mm cable hole Z-mounts
Front top	1	450 x 88 x 12	0.0396	3*4x35, 4*4x25 wood 2*4x25 + 2*4x16	Z-mounts
Top plate	1	450 x 88 x 12	0.0396	2*4*25 + 4*4x25 wood	
Bottom plate	1	250 x 88 x 12	.0220	16*4x20 wood screws	Lift 3mm above ground!!!
Summary:					
Boards	4	450 x 88 x 12	0.1584		
	3	250 x 88 x 12	0.0660		
	2	374 x 88 x 12	0.0658		
			0.2902		Total area
Screws:	17			4x35 wood screws	T20
	10			4x25 wood screws	T20, Z-mounts side
	16			4x20 wood screws	T20, for Y-rod clamps
	4			4x16 wood screws	T20, Z-mounts front
	6			M4x30 metall screws	connect Y-assembly with X/Z-assembly
Nuts:	6			M4 nuts	Nylock!
Washers:	12			M4 washers	

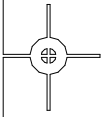
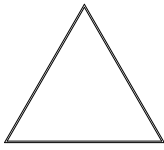
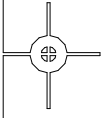
### Rods and Y-Frame

Rods:	Count:	Diameter:	Length:	Comment:
Smooth X	2	8mm	460mm	
Smooth Z	2	8mm	395mm	
Threaded Z	2	M5	385mm	
Short threaded Y	3	M8	215mm	front and lower read rod
	1	M8	300mm	upper rear rod, connects to stand walls
Long threaded Y	2	M10	400mm+X	
Long smooth Y	2	8mm	370mm+X	
M5 nuts	2			Z-axis (brass?)
M8 nuts	28			
M8 washers	22	16mm		
M8 washers	4	30mm		upper rear M8 rod & stand walls
M10 washers	8	20mm		

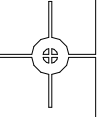
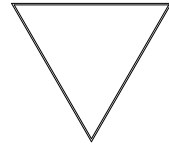
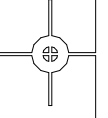
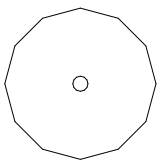
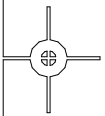




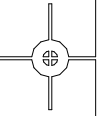


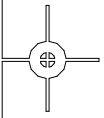
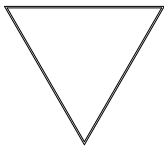
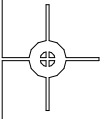


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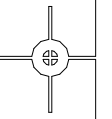
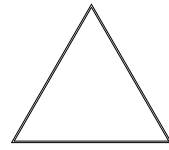
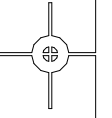
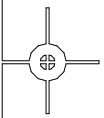


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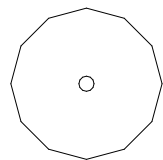
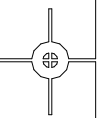




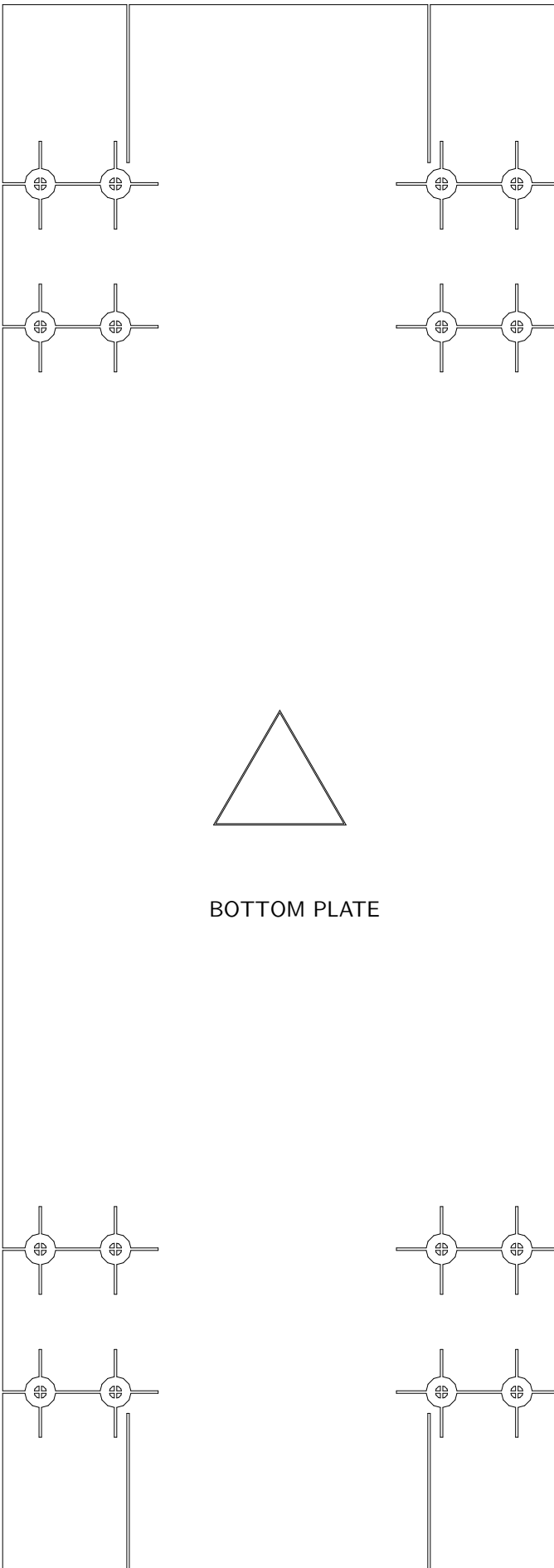
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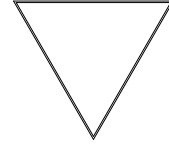
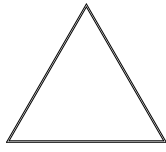


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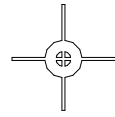
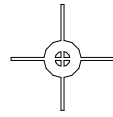
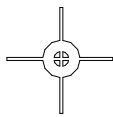
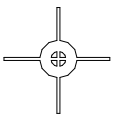


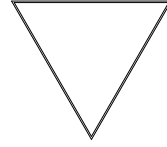
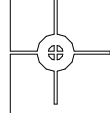
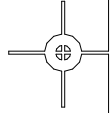
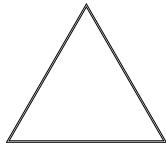




TOP PLATE right

TOP PLATE left





FRONT TOP left

FRONT TOP right

