

**3D PRINTING AND DESIGN REFERENCE DOCUMENT**

<b>Document Title:</b>	Voron 2.4 350mmm Build Research
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**REVISION HISTORY**

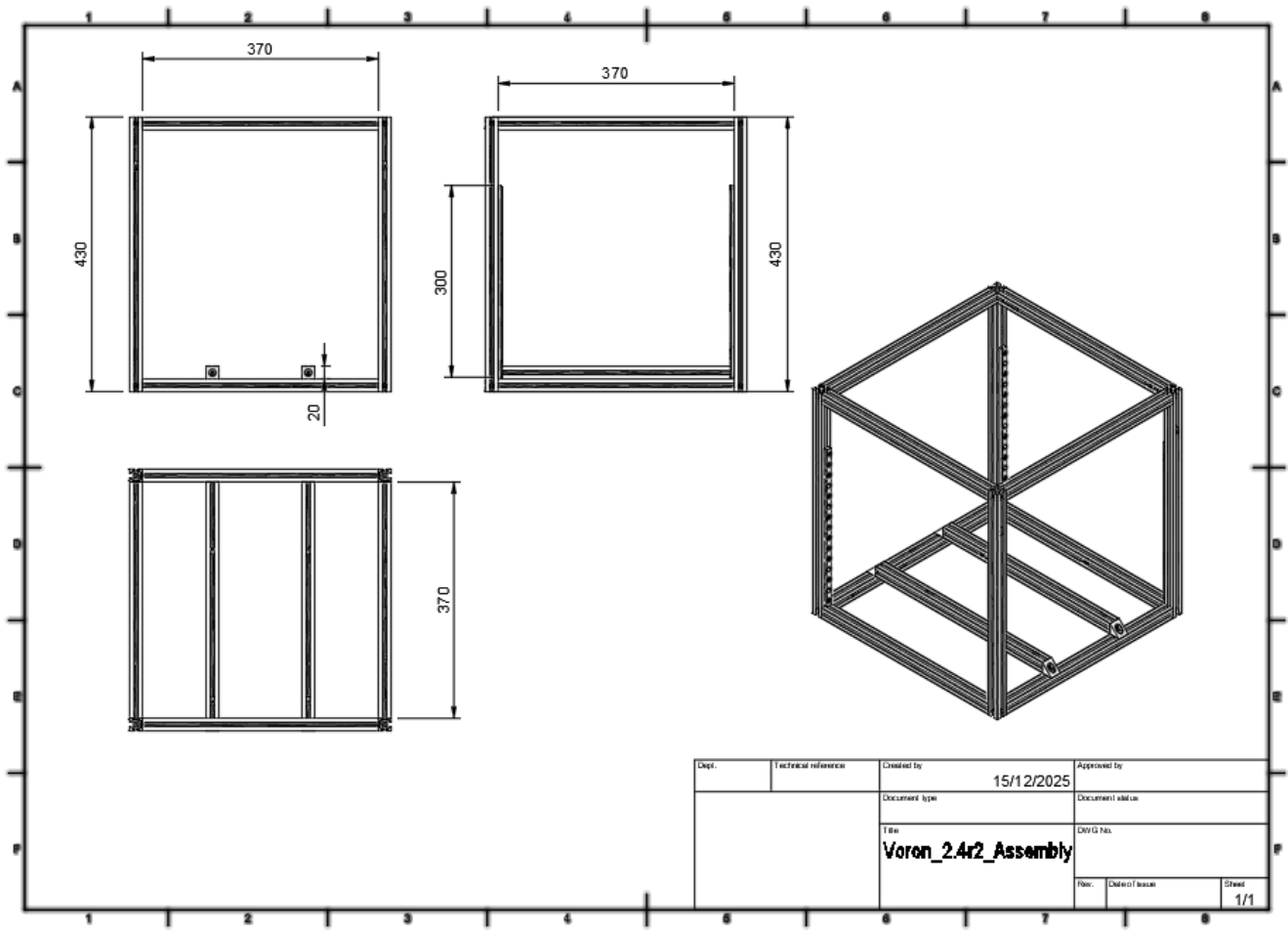
<b>Revision</b>	<b>Details of Modification(s)</b>	<b>Reason for modification</b>	<b>Date</b>	<b>By</b>
0	Draft release	Document description here	2025/12/02 17:13	jattie

## Voron 2.4 Build

This section facilitates research of information for a building a Voron 2.4.<sup>1)</sup>

### Building the frame

The Voron publications default model is for a 246mm build plate and surprisingly not publishing scaled models and the 3D model is not parametric or scaling either.

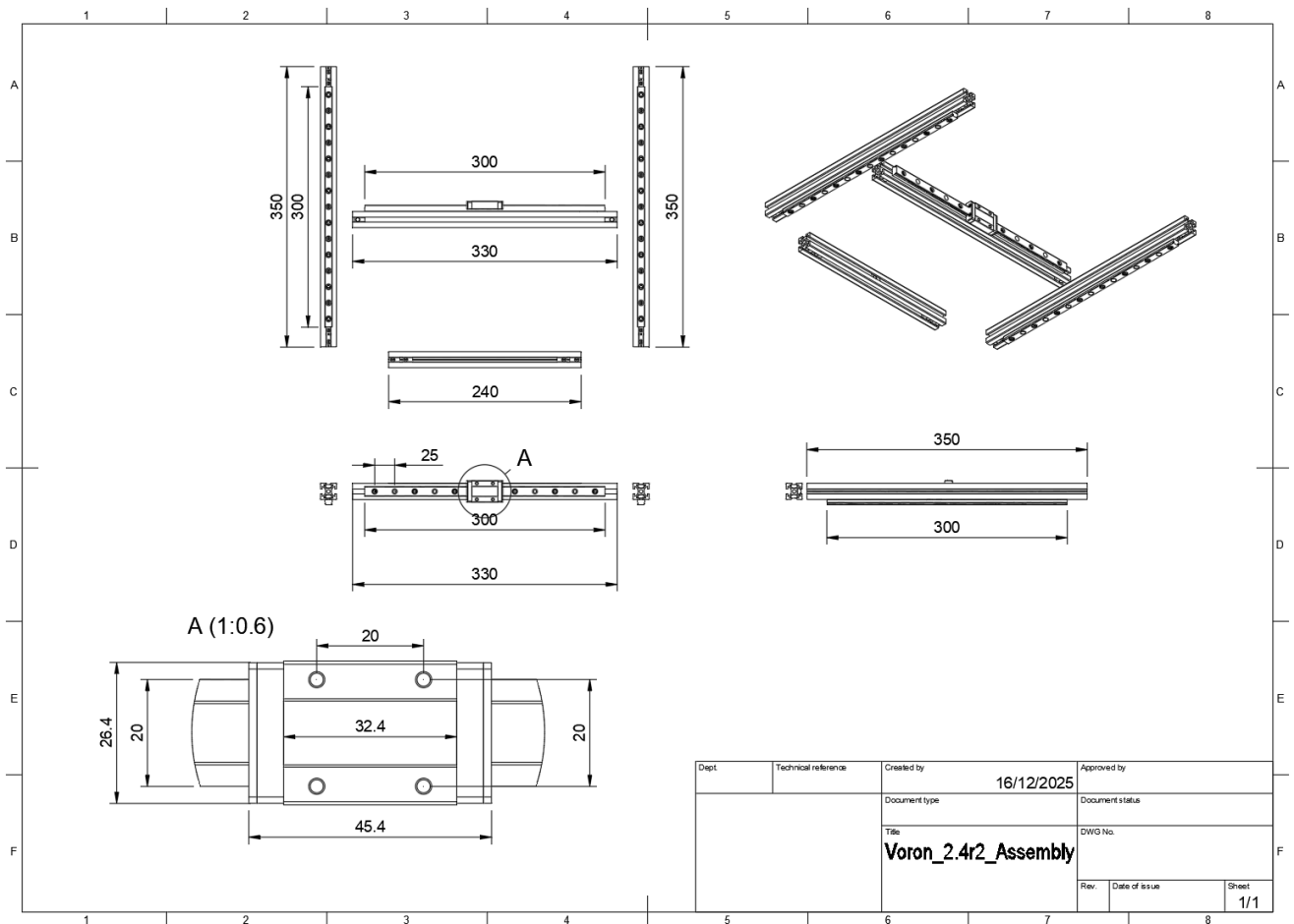


Part	Dimension	Quantity
20 x 20 Aluminium Profile	370mm	10
20 x 20 Aluminium Profile	430mm	4
Lineaer Rails	9 x 300mm	4

In order to Facilitate a 350mm build this needs to be scaled. This is not a problem when buying kits, however building from raw materials needs to dimensional details.

- 4 x 530 mm (drilled) → The vertical uprights. They set the printer’s height and must be drilled for blind joints.
- 10 x 470 mm (tapped) → The horizontal frame members (top and bottom squares, plus gantry supports). These are tapped to accept fasteners.

## Building The Gantry



- 2 x 450 mm → The gantry extrusions that carry the XY motion system.
- 1 x 430 mm → The rear crossmember that supports the Z drives and belts.
- 1 x 340 mm → The front crossmember that supports the front idlers and closes the frame

### Profile for 350mm Frame

530	4	2,120
470	10	4,700
<b>SUBTOTAL</b>		<b>6,820</b>

### Profile for 350mm Gantry

450	2	900
430	1	430
340	1	340
<b>SUBTOTAL</b>		<b>1,670</b>
<b>TOTAL</b>		<b>8,490</b>

### Cost effective Aluminium Profile Material Options

Material	Unit Price	Total	
<a href="#">Flowmax 20 x 20 Profile x 3m</a>	34.42	3	€103.24

## West3D Voron V2.4 Self-Source Configurator

<b>Build Size: 350mm</b>	€131.13
<b>Frame: Space Grey (W/ Angle Brackets)</b>	€13.11
<b>Printed Parts: No Printed Parts</b>	
<b>Fasteners: BDF Stainless Steel</b>	
<b>Motion: POWGE Motion Silver</b>	€43.71
<b>Rails: Berserker Rails - Medium Preload</b>	€43.71
<b>Ready to Roll Add-on: No - I'll do that myself</b>	
<b>XY Endstop: XY PCB</b>	
<b>Z Endstop: Z PCB</b>	
<b>Probe: CNC Tap Kit</b>	€30.60
<b>SSR:</b>	Panasonic AQA211VL 15A SSR
<b>Motors: LDO V2.4 Motor Kit</b>	€26.23
<b>Controller Board: Manta M8P (With CB2)</b>	€52.45
<b>Display: BTT PiTFT 5" Touch Display</b>	€43.71
<b>Stepper Drivers: TMC2226</b>	€8.74
<b>Power Supply:</b>	LRS-200-24 (24v)
<b>Extruder Components: Galileo 2 (G2E)</b>	€26.23
<b>Wiring Harness: V2.4 / Trident Wiring Harness</b>	
<b>Cable Chains: Standard Cable Chains</b>	
<b>Bed Heater: West3D Performance Edge to Edge</b>	€13.11
<b>Aluminium Build Plate: Voron 2.4 MIC6 Build Plate</b>	
<b>Flex Plate: Energetic Doubled Sided Smooth/Texture (350)</b>	€13.11
<b>Build Plate Magnet: Standard</b>	
<b>Toolhead: Stealthburner</b>	
<b>Toolhead PCB: Nitehawk Stealthburner</b>	€24.48
<b>Hot End: Rapido PT1000 HF</b>	€8.74
<b>Power Inlet / Rocker Switch: Tyco Filtered Inlet + ZF Rocker</b>	
<b>Fans: Premium Option (Delta Blower)</b>	€8.74
<b>Side + Door Panels (Acrylic or ACM): Smoked</b>	€4.37
<b>Back/Deck/Bottom Panels (ABS): Black</b>	
<b>Titanium Backers w/ Ti Screws: Standard</b>	
<b>Printed High-Temp HTN Nylon Ducts: Not Needed</b>	

**Kinematics Kit: Yes - Titanium**

€52.45

1)

<https://www.vorondesign.com/>

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