

3D PRINTING AND DESIGN REFERENCE DOCUMENT

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| Document Title: | Voron 2.4 350mmm Build Research |
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REVISION HISTORY

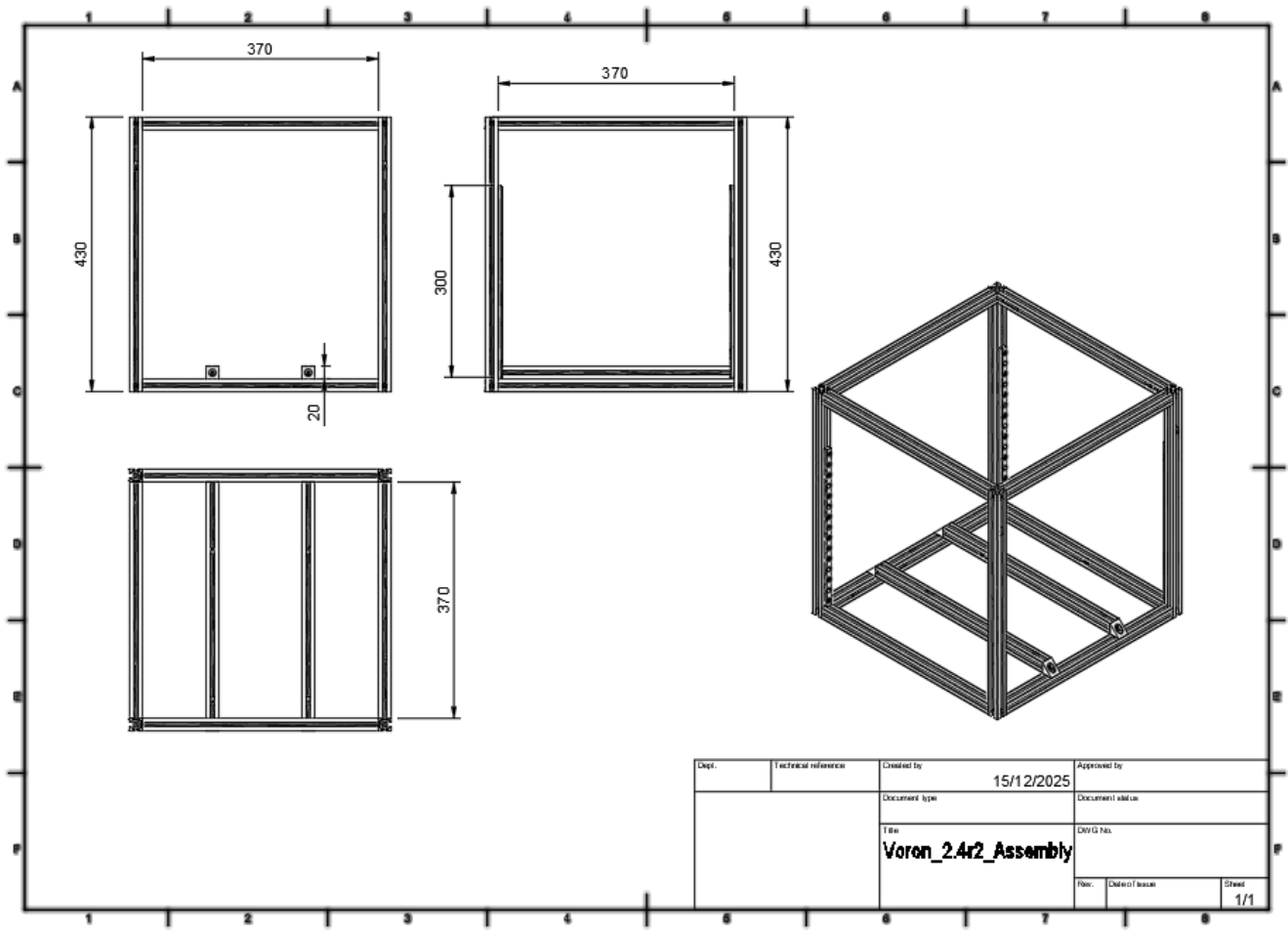
| Revision | Details of Modification(s) | Reason for modification | Date | By |
|-----------------|-----------------------------------|--------------------------------|------------------|-----------|
| 0 | Draft release | Document description here | 2025/12/02 17:13 | jattie |

Voron 2.4 Build

This section facilitates research of information for a building a Voron 2.4.¹⁾

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.

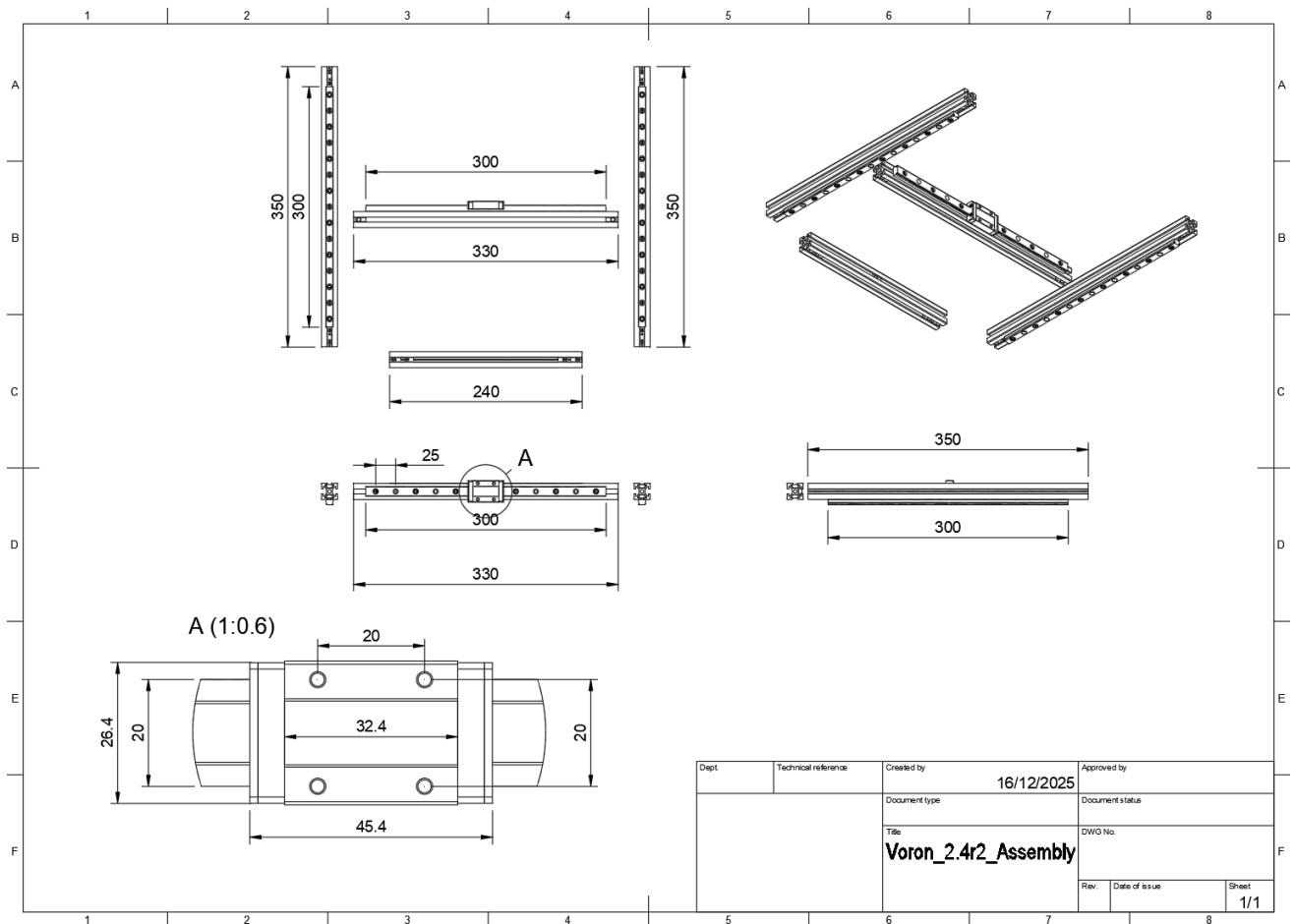


| Part | Dimension | Quantity |
|---------------------------|-----------|----------|
| 20 x 20 Aluminium Profile | 370mm | 10 |
| 20 x 20 Aluminium Profile | 430mm | 4 |
| Lineaer Rails | 9 x 300mm | 4 |

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 |
| SUBTOTAL | | 6,820 |

Profile for 350mm Gantry

| | | |
|-----------------|---|--------------|
| 450 | 2 | 900 |
| 430 | 1 | 430 |
| 340 | 1 | 340 |
| SUBTOTAL | | 1,670 |
| TOTAL | | 8,490 |

Cost effective Aluminium Profile Material Options

| Material | Unit Price | Total | |
|--|------------|-------|---------|
| Flowmax 20 x 20 Profile x 3m | 34.42 | 3 | €103.24 |

West3D Voron V2.4 Self-Source Configurator

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

Kinematics Kit: Yes - Titanium

€52.45

1)

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

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