

Ratrig V-Minion Belted Z Assembly (Mod)



Squirrelbrain

[VIEW IN BROWSER](#)

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Summary

Files to convert the Z Axis from Lead screw to belt.

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Tags: [zaxis](#) [belted](#) [ratrig](#) [vminion](#) [minionupgrades](#)
[zassembly](#) [minionmods](#)

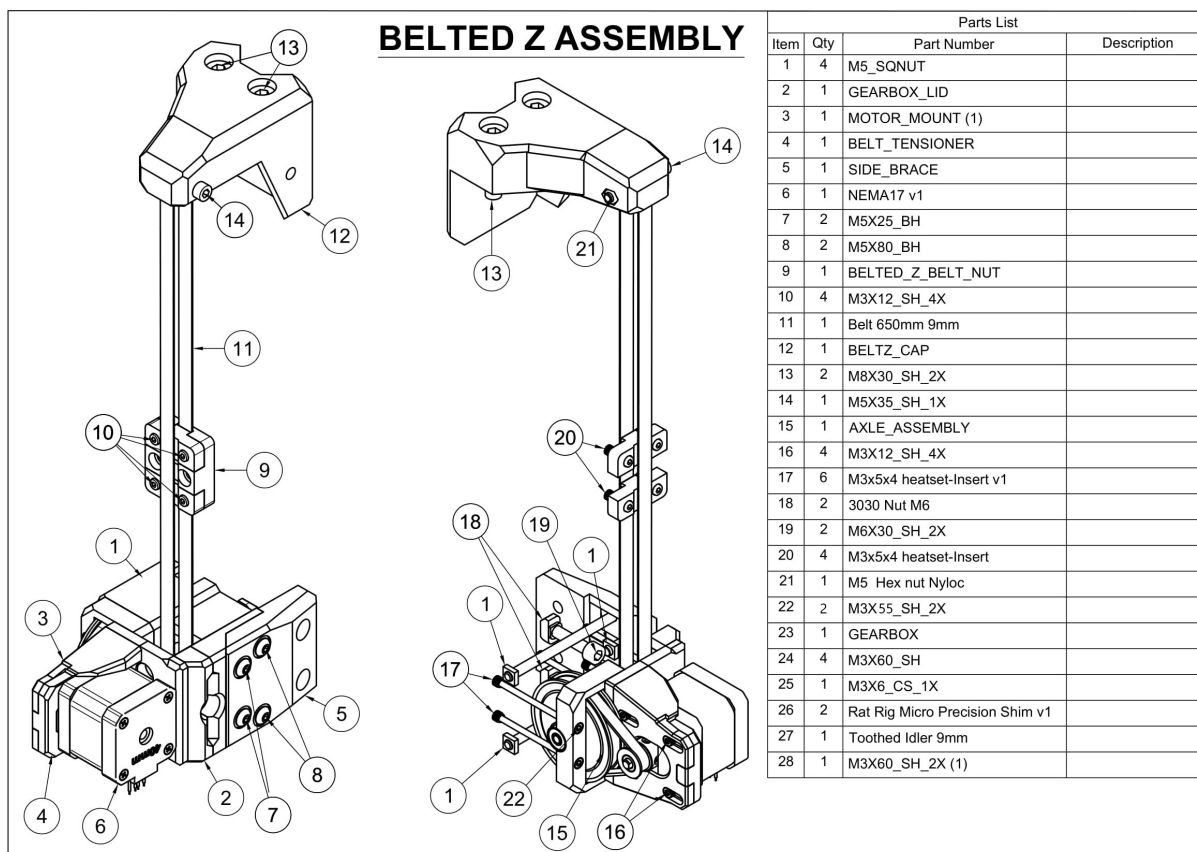
*ADDED Z-AXIS DRAG-CHAIN MOUNTS.

To fit a Drag-chain to the Z axis with the Belted Z you will need:

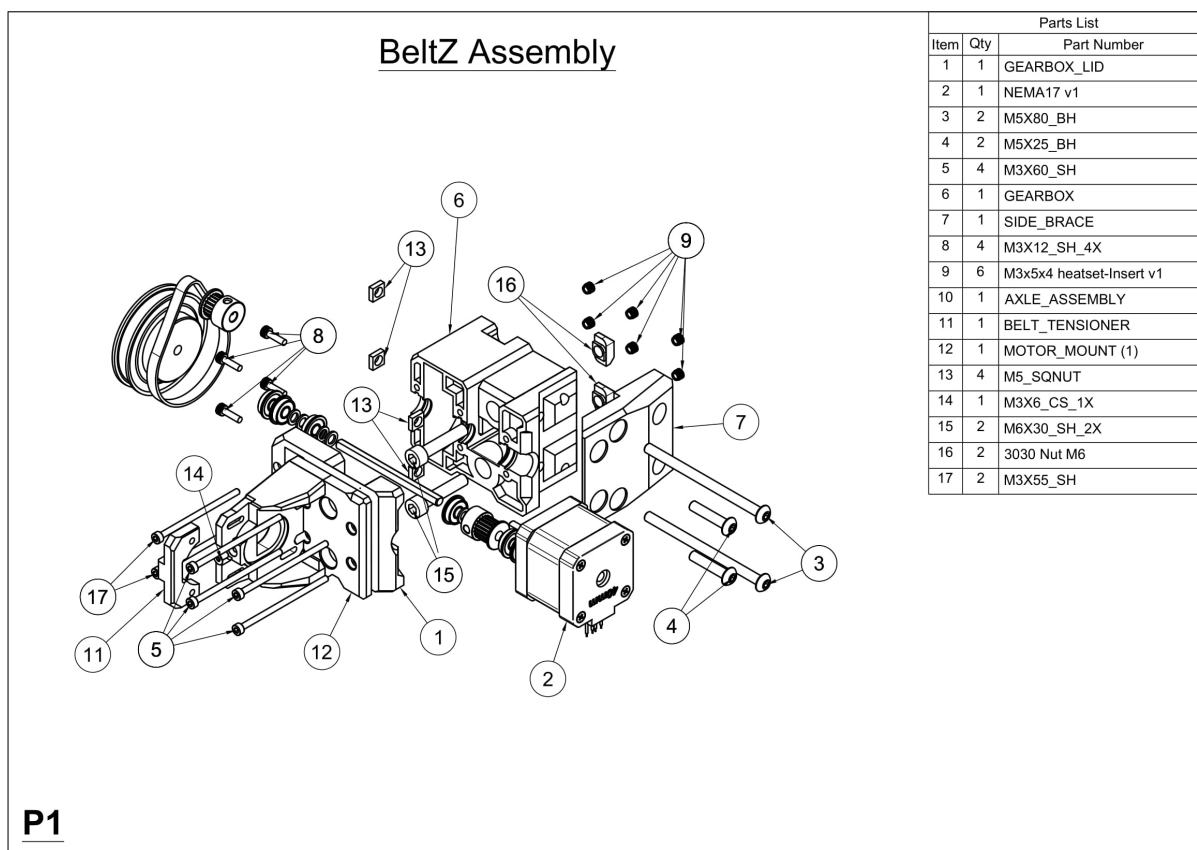
- MOTOR_MOUNT_Z_CHAIN_V1.1,
- Z_LOWER_MOUNT (V1) v1
- BELTED_Z_BELT_NUT_MAIN_V1.1
- BELTED_Z_BELT_NUT_CAP_2X_V1.1
- ZX JUNCTION (V2)
- X MOTOR CAGE (V2)

Gearbox has clearance for a belt between 9-12mm wide.

Axle assembly uses the same componets as the Voron V0.1, swap the 20T motor pulley for a 16T for 5:1 gear ratio.



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Axle assembly

P2

Parts List		
Item	Qty	Part Number
10	1	AXLE_ASSEMBLY
10.1	1	5mmx70mm-Shaft-with-Flats v1
10.2	6	F695 2RS
10.3	1	GT2 20T 6mm Powge v1
10.4	1	Pulley 20T 9mm RR
10.5	6	5x8x1_SHIM
10.6	1	GT2 80T Pulley Powge v1
10.7	1	GT2 Belt Loop - 188mm

Model files

belt_tensioner_v1.3mf

motor_mount_v1.3mf

gearbox_to_3060_spacer.3mf

☐ (NEEDED) fits between the gearbox extrusion. Scale on Z in Slicer to match your corner plate.



side_brace_v1.3mf



z_belt_nut_cap_2x_v1.3mf



z_belt_nut_main_v1.3mf



beltz_z_cap_v1.3mf



x_gantry_end_cap_extended_v1.3mf



belted_z_belt_nut_cap_2x_v11.3mf

☐ Needed when fitting ZX_JUNCTION_V2



motor_mount_z_chain_v11.3mf

☐ Needed when fitting Drag-chains.



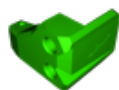
z_lower_mount-v1-v1.3mf

☐ Needed when fitting Drag-chains.



belted_z_belt_nut_main_v11.3mf

☐ Needed when fitting ZX_JUNCTION_V2



beltz_z_cap_large_pulley_v1.3mf

☐ Allows the use of larger idler pulley



gearbox_hex_nuts.3mf

☐ Use Hex nuts instead of the 4x square nuts



gearbox_lid_v11_trap_connection.3mf



main_body_v11_trap_connection.3mf

beltz_assembly.f3z

beltz_assembly.step

Other files

minion_beltz_assembly-drawing-page-1-v2.pdf

☐ Bubble 22 should be M3x55 X2

minion_beltz_axle_assembly-drawing-v1.pdf

beltz_assembly-drawing-v3.pdf

belted_z_v1-bom.pdf

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