FT-V Phase 2 Assembly Notes

Phase 2:
Bed assembly (for new bed only)
Drill and tap holes for M3 screws from the bottom of the bed—in two front corners, and back center. Screw in M3 screws part way in to the bed, then the heads will rest in sockets in the Z bed mounts. There is a hole in the bottom of the Z bed mount where an allen key will fit so you can adjust the bed.

Use two 460mm extrusions as the main support from left to right, and cut shorter extrusions to fit as front/back supports. You can drill and tap the ends of those, or just use the four corner brackets as given.

The Z bearings will slide (very tightly) in to the Z brackets.

Phase 2 - Bed/gantry alignment:

1. Home the printer
2. Move the bed (with the motors on) nearly all the way to the bottom of the printer. Make sure that the 2020 extrusion bed frame is parallel to the base plate--if it is not, adjust the lead screw/GT2 pulley to make sure it is.
3. Home the printer
4. Move the bed (with motors on) nearly all the way to the bottom of the printer. Measure from the top surface of the cast aluminum bed to the base plate. Adjust the 3 bed screws to make sure that the bed is an equal distance from the base plate of the printer at all 3 bed screw locations.
5. Home the printer
6. Adjust the Z height at the center of the bed so that the nozzle is creating a small amount of resistance with a piece of paper between the nozzle and the bed
7. Move the nozzle to each of the 4 corners of the bed. At each corner, if the nozzle is too high or low, adjust the height of the Y rail extrusion in that corner. This is immensely easier with blind joints, as you can use the access hole and a ball end allen key as a lever and ever so slightly adjust the extrusion. Continue adjustment until all 4 corners have the same resistance
8. Finished! Now your bed is parallel to your printer frame, and your gantry is parallel to your bed.