

HD GANTRY ASSEMBLY INSTRUCTIONS

NOTE: ASSEMBLY SHOWS ELECTRICAL ENCLOSURE ON RIGHT HAND SIDE OF MACHINE. IF LEFT HAND IS REQUIRED, ASSEMBLE FRAME, GANTRY END ASSEMBLIES, AND CARRIGE BELT REDUCTION OPPOSITE. (MIRRORED)

See print **HDG GANTRY**

1. Installing v-rail: Center v-rail on long 3"x3" extrusion. Mark all holes and install tee nuts at each mark. Angle tee nuts slightly towards center of extrusion. Replace v-rail and install the socket head cap screws.
2. Installing gear rack: Cut gear rack to 54" for 4' gantry and 66" for 5' gantry. Clean gear rack with a scotchbrite pad and alcohol and dry with a white paper towel. If paper is not completely clean, repeat. Apply acrylic foam tape to gear rack. Wipe extrusion clean with alcohol on side opposite of gear rack and let dry. Center gear rack on extrusion and align with the top of the extrusion per the print. Apply pressure to the gear rack and tape.
3. Insert bolts and tee nuts into the cable track support pan. Slide into slot in the bottom of the extrusion per the print. Center the pan on the extrusion and tighten bolts.

See print **HD**

1. Assemble end assemblies to match the print. **(NOTE: CAN BE ASSEMBLED OPPOSITE)**
NOTE: DO NOT install lower captivation wheels until gantry assembly is on frame. Also, **DO NOT** install belt reduction units if that option is purchased, but **DO** install the tee nuts to mount the belt reduction units. **(NOTE: SIDE ASSEMBLIES CAN BE ADJUSTED TO ALLOW THE Z AXIS TO BE CLOSER OR FURTHER FROM THE FRONT OF THE TABLE)**

OPTIONAL See prints **HDG RED** and **HDG CAR RED**

1. Assemble the belt reduction units to match prints. Center the bearings on the side plates and install the 3/8" x 7/8" long bolts and jam nuts. **NOTE:** At this point, loosely install the shaft and use a square to verify that the shaft is perpendicular to the plates. If not, tap the shaft to square. This must be completed before the reduction plates and timing sprocket are assembled. **NOTE:** Retaining compound is required between the timing sprocket and shaft. **DO NOT** apply retaining compound between the bearings and shaft. **DO NOT** apply retaining compound to the gears or small timing sprocket on the motors until final assembly when the location can be verified.

See print **HGD CARRIAGE**

1. Install the bearing assemblies to the carriage plate. **NOTE:** The concentric bushings (round) are installed in the upper holes and the eccentric bushings (hex) are installed in the lower holes.
2. Install Z axis. **NOTE:** Use the center holes for placement if no scribe is going to be installed. Choose the right or left holes to leave room for a scribe assembly if one is to be installed.

See print **HD**

1. Slip end assemblies onto gantry main assembly. **DO NOT** tighten until it is matched up to rails on frame. See print **END SPACING** for proper dimension.
2. Install carriage assembly and tighten lower eccentric wheel assemblies to remove all play.
3. Install cable track