Specifications for high vacuum gantry system for VOiD chamber

1. Designed for continuous operation in high vacuum (<10E-7 Torr)
    a. Low outgassing materials used exclusively
    b. Bearings cleaned and re-greased with Braycote 601EF grease or equivalent HV/UHV lubricant
    c. Thermal provisions integrated into motor design to prevent overheating
    d. PTFE, Kapton, or other vacuum compatible wire insulation used
2. Each linear stage to be driven by vacuum compatible (see Req.1) stepper motor and lead screw.
3. Position feedback with motor encoder for each linear stage
4. X and Y linear stages must be capable of 24 inches or more of travel without exceeding a total assembled length of 32 inches.
5. Z linear stage must be capable of 12 inches or more of travel without exceeding a total assembled length of 20 inches.
6. X and Y linear stages must have a positioning resolution of at least 6E-4 inches.
7. Z linear stage must have a positioning resolution of at least 4E-6 inches
8. X and Y linear stages must not weigh more than 15 pounds each.
9. Z linear stage must not weigh more than 7 pounds.
10. X, Y, and Z linear stages must each have a load rating of at least 50 pounds.