| D-H Parameter Values from Devon | | | | | | | |
|---------------------------------|------------|-------------------|-----------------|-------------------|-----------------|-------------|--|
| Joint Transition | θ | d | Value of d (mm) | а | Value of a (mm) | alpha (deg) | |
| 1-2 | θ1 | d1 | 336.55 | | | -90 | |
| 2-3 | θ2 - 90deg | | | a2 | 434.46 | -90 | |
| 3-4 | -90deg | d3 | volt2deg | | | +90 | |
| 4-5 | θ4 - 90deg | d4 | 45.86 | | | -90 | |
| 5-6 | θ5 | | | a5 | 120.51 | +90 | |
| 6-7 | θ6 + 90deg | d6 | 67.08 | a6 | 39.52 | -90 | |
| | | Z-axis difference | | X-axis difference | | | |

| Variable | Name | Measurement | |
|----------|-------------|---|--|
| θ | joint angle | rotation about the z-axis betweedn two frames | |
| d | link offset | translation along the z-axis between two frames | |
| a | link length | measured distance along the x-axis between two frames | |
| alpha | link twist | rotation about the x-axis between two frames | |

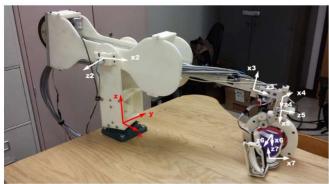


Figure 11: Movement frames for degrees of freedom (DOF) present in the orthosis. Full control of position and orientation is accomplished with 6 rotational DOF and 1 translational DOF.